University of Nottingham

Challenges of the Banking systems of Oil Exporting Countries (Case of Azerbaijan)

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MBA in Finance

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by

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Abstract

Recent trends of increasing oil prices in world commodity markets lead to the notion that it is a good chance for oil exporting countries to accelerate development of their national economies and to strengthen their financial systems. At the same time, the impact of instability of commodity pricing process (especially in case of unrenewable, limited natural recourses) to national economies is a matter of concern both for buyers and sellers of oil. Moreover, in oil exporting countries these concerns are also being pressured by such side-effects of oil revenues such as the “Dutch Disease”.

This work investigates the impacts that the above mentioned problems may have on soundness of banking industry in oil exporting countries. It can be of interest to policy makers and people responsible for the financial stability, especially in the developing countries.

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1. Introduction

Throughout history the discovery of essential reserves of any kind of natural resources in a country was considered as an opportunity for wealth and enrichment of the nation. But, the contemporary development of business, international trade and the integration of world financial markets have complicated the nature of the "benefits" that such natural commodities bring to the country and economy**.**

Nowadays, countries exporting natural resources, especially hydrocarbons to world markets, besides receiving a huge amount of petrodollars face the negative macroeconomic effects "brought" by petrodollars.

Huge oil revenues can cause negative impacts on the most aspects of national wealth and thus stipulate origin of "Dutch Disease". This, in turn, may expose the economy of a country not only to the pressure of exchange rate fluctuations but also may result in the loss of international competitiveness, suffocating of local manufactures, weakening financial soundness, and eventually deterioration of a national economy**.**

1.1 Aim of the work

The aim of this work is to identify what kind of problems, difficulties and financial risks a banking system is likely to face in a country where economy essentially relies on the export of oil.

It is also expected to define recommendations for settlement of these difficulties on the basis of the best practices. Particular attention will also be paid to the role of government in helping the banking system offset the "effects of oil - revenues".

The work will generally focus on the experience and current situation in the Republic of Azerbaijan as a typical country where economy essentially depends on oil revenues.

The work consists of four main parts followed by conclusions. The first chapter gives an introduction to main goals of the work, and a general overview of Azerbaijan Republic which is used as main country for research purposes. The second chapter presents a survey of relevant literature and gives a definition of Dutch Disease, its symptoms and describes its different effects on an economy and its banking system. The third chapter focuses on investigations of various risks faced by banks in oil exporting countries. It also suggests some instruments that might be used to minimize these risks. The final chapter underlines the importance of policies and strategies implemented by the government and particularly by central banks in providing stability of economy and soundness of banking system in oil exporting countries.

1.2 Country overview

Azerbaijan is one of 15 countries which gained independence after collapse of the Soviet Union in 1991. The territory of the country is 86600 sq. km and the population is around 8.3 million 93% of which are Muslims. The country is situated in the crossroads of Eurasia.

1.2.1 Current macro-economic overview

Over the last several years Azerbaijan has faced unprecedented growth of its economy. The annual growth rate reached the highest level in the world with 34.5% in 2006 and 25% in 2007 (National Bank of Azerbaijan, 2008). The growth mostly was due to the oil-boom and signing of international oil contracts.

The current international credit ratings of the country are **B** short term and **BB+** long term with stable outlook given by Fitch as of February 2008.

The budget revenues of the country is expected around US$14.0 billion and expenditures US$ 12,7 billion in 2008.

After decade of low Inflation (3%), the country is now exposed to an accelerating rate of inflation rate, which has reached 15-20% as a result of foreign currency inflows from oil exports. The attempts by the government to maintain the inflation within a single-digit rate have not been yet successful. The most popular tool used by the government to extract excess liquidity from the economy is treasury bills and allowing the national currency to appreciate.

1.2.2 Foreign Exchange

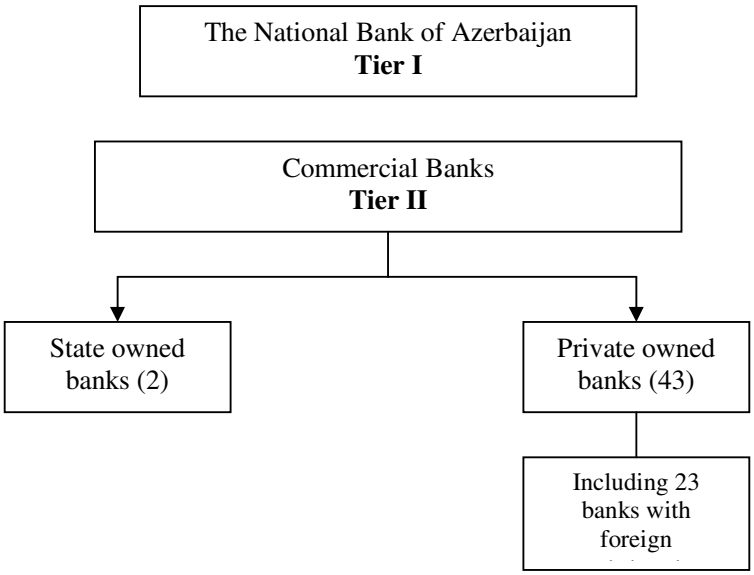
The national currency- manat - is stable and was allowed to appreciate against the dollar by 6.1% in 2005, 5.4% in 2006, and 3.4% in 2007. However it should be stressed that the IMF has warned

that significantly more appreciation (roughly 10%) will be necessary to prevent inflation from increasing.

The National Bank has been continuously implemented a strategy of liberalization of the foreign exchange policy. But due to step-by-step nature of this process some restrictions still remain in place.

1.2.3 Banking System

Banking in Azerbaijan is regulated by newly (2004) adopted Law "On the National Bank of Azerbaijan" and Law "On Banks". In accordance with the best international practice Azerbaijan has a two-tiered banking system, with the National Bank comprising the first tier and the remaining banks comprising the second tier.



According to the law the National Bank of Azerbaijan (the NBA) is a state-owned bank and a legal entity with independent status (however its independence can be argued in practice, please see further chapter). It operates as the National (central) Bank with authority to supervise the whole banking industry in the country. The main objectives of the Bank are to provide macroeconomic stability and implement monetary and currency policy. *However in the frame of the current work the implementation of the banking supervision function by the National Bank and its efficiency have an utmost importance*.

In the frame of banking supervision the NBA issues licenses for banking operations, establishes requirements for **minimum regulatory capital**, sets up **necessary prudential requirements** for second-tier bank (National Bank of Azerbaijan, 2007).

The particular feature of Azerbaijani banking system is that in the frame of **Prudential Regulation** the *Commercial banks shall be obliged to classify* their assets and create adequate

reserves against possible losses in accordance with the requirements set up by the **National Bank**. (For comparison in the most European Countries provisions are created in accordance with internal written policies and procedures approved by commercial banks` Board of Supervisors).

Currently, 45 banks are licensed by the Central Bank of Azerbaijan and accordingly all of them provide banking services.

Existence of large quantity of banks does not mean that assets owned relatively fair. Currently two banks which belong to the government participate in more than 50% of the assets of the whole banking system.

The limit for participation of foreign capital in the local banking system has been recently **eliminated**.

However, it should be mentioned that the famous international banks are represented only by the representative offices (have no right to conduct banking activity) of Citibank (USA) and Commerzbank (Germany).

The main figures characterizing Azerbaijani Bank Industry:

01.06.2008, in mln. USD Exchange rate: 1USD=0,8248 AZN

Regulatory Capital of the whole Banking sector	**Assets**	**Credit portfolio**	**Deposits of Physical persons**
1471,6	10 073,4	7180,8	1943,8

(Source: The National Bank of Azerbaijan, 2008)

The comparative-table presented below will assist to realize the size of the banking sector in Azerbaijan:

01.01.2008

Country	Ratio (Bank Assets to GDP)
Azerbaijan	25,1%
Norway	101%
Kazakhstan	92%

(*Sources: National Bank of Azerbaijan, 2008, National Bank of Kazakhstan, 2007, Norges Bank, 2007*)

As it is seen from the table the banking sector of Azerbaijan is relatively small in comparison to GDP and other oil exporting countries. However it should be stressed that one of the reasons of relatively small ratio is the high speed of increase of GDP in Azerbaijan. It has already been mentioned that the economy of Azerbaijan demonstrated unprecedented growth which reached the highest level in the world with 34.5% in 2006 and 25% in 2007. Therefore it could be concluded that the banking industry simply could not keep up with the growth of the economy.

In the context of reforming of the banking sector the NBA has taken steps to prevent the creation of so-called “pocket” banks which are being established to serve the business of a single person or a corporation. Clearly that existence of such banks in the industry impose an unjustified risk on depositors as banks of such a kind can not implement a sound policy on risk diversifications and conduct their business in accordance to the Standards of Corporate Governance.

To this end it is stipulated in the legislation that a bank in Azerbaijan can be established only in the form of public corporation.

Generally it should be noted that in order to improve the quality of the industry the NBA using its authority given by the legislation pursues a course to drive out banks which can impose potential threat to the stability of the industry. For example, the NBA issued regulations defining and prohibiting transactions with “related parties”. As a result of such regulations, many Azeri banks with single “customer-shareholders” became more vulnerable to transactions with related parties and are forced to look for new customers and market opportunities. Most of these banks eventually merged with others or have been acquired.

The NBA completed in 2007 the activities designed to bring the banking supervision's legal and regulatory framework and institutional structure in compliance with the Basel Committee's "Core principles of effective bank supervision" and "Basel 1" capital accord. (Appendix 1)

1.2.4 Taxation

Taking into account the poverty level (16%) in the country the tax regime were designed in a way to protect the low income population. Presently income tax rates vary from 14% to 35% depending on the monthly income received. Corporate tax has been lowered to 22% and Value Added Tax rate to 17%.

1.2.5 Trade and Customs Duties

Export is exempt from any custom duties. As of June 2008 the total export of the country was US$ 3,8 billion which was 188% more than the previous year. The export is dominated by oil and the products of oil processing. Non-oil exports include metals, general and transport equipment, foodstuff, and chemicals.

Import of goods is subject to import duties. As of June 2008 it amounted to US$ 1,9 billion, with capital goods having the largest share. Main trading partners are Italy, Russia, the UK, Turkey, Germany and France. Presently the country is actively engaged in negotiations regarding the entering WTO. Within the framework of these negotiations a strategy consisting of several phases of liberalization of national economy has been elaborated.

1.2.6 Oil and Gas Sector

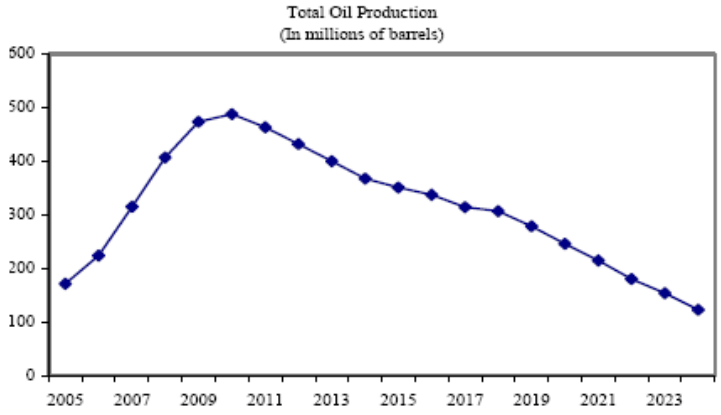
Azerbaijan has a rich natural resource endowment and a long history of oil and gas exploration. Oil and gas reserves in the country are estimated to be the third largest in the Caspian region (U.S. Department of Energy, 2002)

The government-owned entity, The State Oil Company of Azerbaijan (**SOCAR**) is responsible for all aspects of oil and gas exploration and export. Around 20 major PSA contracts have been signed between Azerbaijan and 30 companies representing 15 countries.

The domestic oil and gas industry is connected with international markets through a number of oil and gas export pipelines:

1. Baku-Tbilisi-Cheyhan (Turkish Mediterranean Port) oil pipeline
2. Baku-Novorossiysk (Russian Black Sea Port) oil pipeline
3. Baku-Tbilisi- Supsa (Georgian Black Sea Port) oil pipeline
4. South Caucasus (Baku-Tbilisi-Erzurum) gas pipeline.

According to the IMF oil production in Azerbaijan will reach its peak level in 2009 -2010. The estimations are given bellow.



1.2.7 Oil Fund and EITI

The State Oil Fund of Azerbaijan was established in 1999 as an extrabudgetary institution. The main purpose of the Fund is to efficiently manage the oil revenues of the country and to play stabilization role protecting the local economy from fluctuations.

The fund is also intended to address the needs of refugees and internally displaced persons, education, poverty reduction, and rural living standards. According to estimates of the IMF in next 15-16 years Azerbaijan will receive about US143 billion, a significant portion of which will be accumulated in the Fund. **The assets of the Fund are US$ 6.7 billion as of 01.06.2008**.

Pursuant to the State Oil Fund's Regulations approved by a Decree of the President of the Republic of Azerbaijan, the Oil Fund **has a three-level management structure**:

1) President of the Republic of Azerbaijan;

2) Supervisory Board;

3) The Executive Director.

The supervision of the Fund's activities is discharged by **the Supervisory Board** representing the government and general public. The Supervisory Board is responsible for reviewing of the Oil Fund's draft budgets, use of funds, annual and quarterly reports, balance sheet, and draft annual cost estimates associated with the management of the Fund.

The State Oil Fund's everyday activity is managed by the Fund's Executive Director.

The comparative-table presented below will assist to have a clear view of probable impact on the banking industry which may be exerted by the Oil Fund:

Table: Ratio between the balance in the accounts of the Oil Funds and GDP as of 01.01.2007

Country	Balance	Ratio
Azerbaijan	$ 1.9 billion	17.5% of GDP
Norway	$ 284.9 billion	114/1% of GDP
Kazakhstan	$ 14.1 billion	9.5% of GDP

(source: Asian Development Bank, 2008)

After initial signing of the huge oil contracts it was required that all initial revenues generated under the oil contracts must be accumulated in the State Oil Company of Azerbaijan (state-owned corporation responsible for all aspects of oil and gas exploration and export) accounts with the International Bank of Azerbaijan starting from year 2000. However after creation of the State Oil Fund all revenues, related with the export of the oil, accumulated in the accounts of SOCAR were transferred from its accounts to the State Oil Fund's account with the National Bank of the Republic of Azerbaijan, thus constituting the Fund's opening balance sheet (State Oil Fund of Azerbaijan, 2001).

The main Sources of revenues of the State Oil Fund of Azerbaijan (***for January – June, 2008***):

- Sales of **Profit Oil - 4866, 0 mln. USD**
- Bonus Payments - 0, 4 mln. USD
- Oil transit fee - 0, 8 mln. USD
- Rental - -
- Revenues from the management of the Fund's assets - 27, 4 mln. USD

Total revenue: 4894, 6 mln. USD

(Source: the State Oil Fund of Azerbaijan, 2008)

In order to define the amount of the **profit oil** the State Oil Company of the Republic of Azerbaijan (*state-owned corporation responsible for all aspects of oil and gas exploration and export*) deducts expenditures associated with the sale of oil, including transportation costs,

customs costs, banking expenses and other costs, before the proceeds from the sale of profit oil are handed over to the Oil Fund.

Bonus payments are the fees payable by foreign oil companies to the Republic of Azerbaijan for oilfield operation rights.

Another source of the Oil Fund's revenue **is transit fees** payable to the Republic of Azerbaijan for utilizing the pipelines (there are currently 3 main oil pipelines which are periodically used by the Central Asian countries).

The Oil Fund's asset management revenues are a further source of the Oil Fund's total revenue. These revenues include revenues from the Oil Fund's asset management, including interest income, dividends, revenue from revaluation of foreign exchange assets, and other revenues.

The Fund's assets are managed in accordance with the **Rules which were approved by Presidential decree in 2005**. The main objective of the rules is to provide necessary base for efficient saving of the Oil Fund's assets through sustainable investment income.

Inside the country the Fund's current account can be held only at the National Bank of Azerbaijan.

Outside the Republic of Azerbaijan the current accounts can be opened with banks rated by reputable international rating agencies such as Standard & Poor's, Moody's and Fitch with a long term credit ratings not lower than "AA-" (Standard & Poor's) or "Aa3" (Moody's).

Another interesting aspect of the Funds activity that even its potential counterparts at international financial markets can be institutions with long term credit ratings not less than BBB (by Standard & Poor's and Fitch) or Baa (by Moody's).

Foreign currency composition of investment portfolio

Only 50% of the total amount of the investment portfolio of the Fund can be invested in dollar denominated assets, 40% in Euro denominated assets and 5% in assets denominated in GBP. The rest part of the portfolio can be invested in assets in currency of countries with a long term credit rating not lower than "A" (Standard & Poor's).

According to the internal procedures of the Fund up to 60% of investment portfolio can be managed by external managers. The maximum assets given to one external manager can not exceed 15% of the investment portfolio.

In 2003 Azerbaijan joined the Extractive Industries Transparency Initiative of The Prime Minister of the UK and became the first pilot country for the assessment. On 3rd June 2008, the

Government of the Republic of Azerbaijan announced the release of the Government's eighth EITI report (Jan-Dec 2007) (EITI, 2008).

The Extractive Industries Transparency Initiative (EITI) supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas and mining.

2. Literature Review

Petro-states are not like other states. While they share many of the development patterns of other developing countries, particularly mineral exporters, economies and financial structure of countries dependent on oil are shaped mainly by the huge flow of petrodollars in a manner that distinguishes them from other states. In this context Karl (1999) has argued that the huge oil revenues may mold internal institutions including financial ones more dramatically than development specialists ever imagined or even seem to understand. Moreover according to Karl (1999) in the countries where oil exploitation coincides with modern state-building petro states become marked by certain skewed institutions.

It is often considered that availability of natural resources is the unambiguous way to prosperity. However, many studies of experiences of countries rich in hydrocarbonate reveal that natural-resource-driven economic development has often lead to deterioration in macroeconomic performance and unbalanced development of industry. For example, Sachs and Warner (1995) provide empirical evidence that economies with abundant natural resources have a tendency to grow less rapidly than economies with scarce natural resources. Almost the same point has been expressed by Soros (2007) who has argued that many countries rich in natural resources are poorer and more miserable than countries which are less endowed.

Large foreign exchange inflows due to the exploitation and export of natural resources often turn into a "curse" (Stiglitz, 2007, p.3) for the country especially if revenues from selling of these resources are mismanaged. Karl (1999) has called this adverse effect of natural resources as a "Paradox of Plenty". To be more precise "resource curse" (G. Soros, 2007) is the term which is used to describe the failure of resource-rich countries to benefit from their natural wealth.

Almost all studies which tried to reveal the link between huge revenues from hydrocarbonate`s export and its negative impact on macroeconomics and in particular on financial industry have almost similar results. The "natural resource curse" is the result of the interaction of two factors: **mismanagement of revenues** and **the "Dutch disease**".

The first factor (Mismanagement of revenues) is purely linked with policy mismanagement and it is often a direct result of easily available revenues that may lead to rent-seeking behaviour and reduce the pressure for necessary economic reforms.

The second factor - "Dutch disease" takes its origin from the negative impact that the discovery of gas had on Nederland's economy and especially on manufacturing in the 1960s. In particular increase in government incomes led to the appreciation of the real exchange rate of Dutch currency.

According to Humphreys and Stiglitz (2007) the pattern of the disease is straightforward:

1) Sudden rise in the value of natural resource exports produces and appreciation of the real exchange rates;
2) Appreciation makes export of non-natural recourse commodities more difficult;
3) Domestic resources such as labour and materials are shifted to the natural resource sector;
4) Foreign exchanges earned from exports are used for imports of goods.

In other words "Dutch Disease," implies that windfall revenues from natural resources can give rise to real exchange rate appreciation, which in turn reduces the competitiveness of the manufacturing sector.

In this context Oomes (2007) defines 4 main symptoms of Dutch Disease, as follows:

1) Real appreciation of national currency;

2) A slowdown in a local manufacturing growth;

3) An acceleration of service sector growth (provided the spending effect dominates the resource movement effect);

4) An increase in the overall wage level in the oil industry.

The problem of Dutch disease may be exacerbated by the "hot money" (Economist, 2008) as a Central Bank has to buy out the huge amounts of foreign exchange in order to avoid sharp appreciation of national currency against foreign one. Gylfason (2001) has argued that overvalued currency in the petro-states is first symptom associated with the Dutch disease. In some cases overvalued currency may create uncertainty among exporters and importers. Unstable exchange rates develop an environment that tends to hurt long term foreign investments. In result as it has been already mentioned the majority of the funds which are pouring into oil exporting countries as a rule consist of "hot money". **This fact may negatively impact on the**

bank institutions as the main institutions responsible for the transformation of excessive resources into credit facility.

Another important point is exchange rates and interest rates in the oil exporting countries. Clearly, interest rates in the oil exporting countries are higher than in the developed countries. However due to huge inflow of petrodollars the exchange rate keep appreciating and it may create the false sense of security among both lenders and borrowers that borrowing from outside is relatively risk free (Harrigan, 2006). Thus agents from the petro states may be tempted to borrow cheaper funds in the form of short-term loans in foreign denominations which are then lent in domestic currency at longer maturities. In practice it means that banks have a large open currency position: liabilities in huge amounts of foreign currency and assets in local currency. Thus even small depreciation of the local currency may bring significant losses to the whole banking system.

Existence of these **open currency positions** became an important reason why officials at the first signs of problem tried to avoid depreciation of the local currency as it would bring banks to huge losses. Mishkin (1999) has demonstrated an impact of depreciation of the exchange rate of the local currency from two perspectives. The first one from the perspective of banks balance sheets, the second one from the perspective of balance sheet of banks` customers. With debt contracts denominated in foreign currency, when there is devaluation of the domestic currency, the debt burden of domestic banks increases. On the other hand, since assets in the balance sheet are typically denominated in domestic currency there is no simultaneous increase in the value of banks assets. If the deterioration in bank balance sheets is severe enough it can even lead to panic and some banks will have to recall their credits. This fact in turn will have negative impact on balance sheets of borrowers (firms and households). The problem of firms and households mean that they are unable to pay off their debts to banks thus resulting in loan losses on the assets side of banks balance sheet. Moreover in case of loan losses banks have to create additional provisions for the losses at the expense of profit. The result is that banks` balance sheets are squeezed from both the assets and liabilities side and net worth of banks therefore declines (Mishkin, 1999). Naturally, this fact has a negative impact on banks` equity.

Apart from the authors mentioned above there have been several seminal studies of the Dutch Disease by Benjamin, Devarajan, and Weiner (1989), Devlin and Titman (2004), Kutan and Wyzan (2005), Gylfason, Prati and Tressel (2006), Omes and Kalcheva (2007), Devlin and Lewin (2004). They cover many oil exporting countries. The most important conclusion they came is that in the most cases any countries exporting hydrocarbons or even receiving significant amount of international financial aid (have similar effect) are exposed to symptoms of the Dutch

Disease. The explanation of the Dutch disease in their work can be generalized as phenomenon which refers to the loss of competitiveness or deindustrialization of economy that occurs when a natural-resource-inspired boom raises the value of local currency groundlessly, making manufacturing of goods unprofitable, increasing imports, and decreasing exports of non oil products.

Excessive overvaluation of the local currency impacts negatively on banking industry as well. Clearly that bank industry plays significant role in realization of international payments. Thus in order to implement these payments the industry has to keep certain amounts of reserves in foreign currency. In this context appreciation of local currency means that banks have to bear losses. In countries where modern hedge instruments are not used or derivative market is on underdeveloped level banks are exposed to the higher currency risk than in the countries with developed market.

In order to demonstrate the implications of the Dutch disease Corden (1992) built up a simple two-industry model which describes the disease's phenomenon. Corden supposed that two industries are producing goods traded at a prices determined in the international market. Both industries employ labor from the same internal market, combined with a factor specific to each sector and in fixed supply. If the price of output in international markets for one of these industries rises, the returns to that industry will increase, pushing up wages in that industry. The marginal productivity of labor in the booming industry will increase and may attract labour and other resources from non booming industry. This change in the sectoral composition is called the **resource movement effect of the boom** (Corden, 1981 and 1992). It can be concluded from the model that the higher wages in the booming industry will also squeeze profits of the other traded-goods industry that has not experienced a rise in price. **As a result, the production of the non booming industry will decline.** Decline can be exacerbated also by the huge inflow of the foreign currency and appreciation of the local one, as in this case the export becomes more expensive and local consumers may prefer cheaper foreign products.

Van Wijnbergen (1984) introduced another model which is based on three sectors and thus accurately reflects the real world to some extent. The model covers a *traditional traded-goods industry (manufacturing), a booming traded-goods industry and a non traded-goods industry*. Higher real incomes from the booming sector lead to increased expenditures on both traded and non traded goods. It can be concluded that this does not cause the price of traditional traded goods to rise, as their price is determined by the international market.

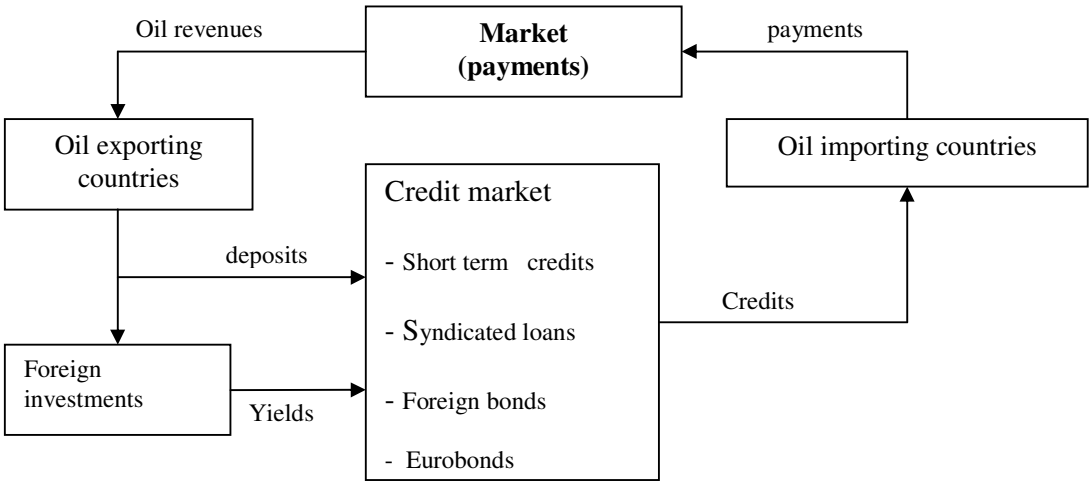
By contrast, the price of non-traded goods is set in the domestic market and may increase due to increased demand. The described effect has been called as the ***spending effect*** (Corden, 1992). In

the context of spending effect particular attention should be given to real appreciation of the currency – defined as an increase in the real exchange rate, **a rise in the relative price of non-traded goods in terms of traded goods.** Clearly that real appreciation of the currency leads to the **resource movement** from the traditional traded to the non traded sector, an expansion in the non traded goods industry, and a contraction in the traditional traded-goods industry – or Dutch disease.

Obviously, that the real exchange rate appreciation is inevitable during a boom; therefore maintenance of money market equilibrium is the matter of paramount significance. In the majority of countries a Central Banks are entrusted with the responsibility to support macroeconomic stability. Thus the decisions taken by a Central Bank in the frame of macroeconomic stability will definitely impact a bank industry.

Bergendahl (1985) has argued that oil revenues might have impact on banking industry in two aspects: risk and rate of return. Return per se has two sides. First, the expansion in oil revenues may result in unexpected large volumes of cash surpluses.

Secondly, these increased oil revenues are supposed to be paid by oil importing countries, which therefore have to expand their borrowing substantially. **Thus it can be concluded that the recycling of oil revenues generates both assets and liabilities for the banks. (Please see figure below):**



Source: *Oxford Institute for Energy Studies (1985)*

The intermediation between deposits and loans generates returns in terms of spread and fees. Spreads exist both on the deposit side and on the lending side, while fees apply only to loan.

Spreads may vary depending on the length of a deposit or on the maturity of the loan. They can also be different maturities for different currency.

In this context it should stressed that Johnston (1983) has worked out three models of potential sources of banking instability: disturbances to the supply of deposits to the bank and cost at which they are available – bank funding risk, disturbances to the loan stock – credit risk, and trend in the parameters of the system. Despite the fact that these three sources were disclosed as far back as 1983 they still have not lost its topicality.

According to Bergendahl (1985) the increasing oil revenues can generate **additional and different forms of risks** for banks. These risks are mainly of two kinds: **funding risks and credit risks**.

The funding risks: The risks concern sudden withdrawals of deposits and sudden reductions in new deposits in comparison to what was expected. This risk has a direct link with a liquidity risk. As in case if a bank is not able to fulfil its liabilities in time then the liquidity problems may suddenly arise. Generally, it should be stressed that the main reason for funding risk is a mismatch between depositing and lending. Normally a bank can avoid these risks through roll-over loans or by means of the use of interbank market. However in some cases these methods are not efficient.

For example mismatching by individual banks may be not a problem when each bank pays regard to its own amount of maturity transformation. There is, however concern that interbank lending can accentuate this process. With a large amount of interbank trading the link between the **initial lender** and **ultimate borrower** may expand into a long chain as one bank passes funds on to another (interbank lending). Thus if each bank in the chain is to undertake an additional piece of maturity transformation, this could gear up the maturity mismatch between initial **non-bank deposits** and final **non-bank loans**. The system as a whole might then become more vulnerable to a withdrawal of non-bank deposits.

The credit risk: the risk is that borrowers may not be able to service its debt commitments. It is also relates to the risk that governments by using currency regulation regimes or similar tools may hinder the servicing of the debt. Naturally, that the credit risk has a direct impact on the ability of a bank to make credits. The lower level of return of credits the lower a bank's resource base for credits. However the special importance of banks as financial intermediaries in the financial system implies that if their ability to lend is impaired, overall lending will decline and the economy will contract. And again the deterioration in the balance sheets of financial intermediaries hinders their ability to lend and even can serve as a key factor for financial crises (Mishkin, 2001).

It is obvious that if banks suffer deterioration in the quality of their credit portfolio then losses can be covered at the expense of capital and thus substantial contraction of their capital will be observed. The industry (bank industry) has only two choices: either cut back on their lending or try to raise new capital. However when bank institutions experience a deterioration in the quality of the assets (say credit portfolio) it is very "hard for them to raise **new capital at a reasonable cost"** (Mishkin, 2001). Thus the typical response of financial institutions with low asset quality is a contraction in lending, which slows economic activity.

The situation described above can be considered as a typical one for a resource exporting countries in the post boom period. The huge amounts of petrodollars had been poured into the economy during boom period and banking system had to "digest" the money. Result: the money had been invested even in doubtful projects which later would turn into low quality assets for a bank.

The studies showed that the impact of the huge incomes from export of natural resources on the economy is not identical in all countries. The impact will depend on many aspects, such as, preventive government actions, structure of the banking system, fiscal policy, market liberalization, specific characteristic of economy and etc.

For example, Nigeria has an abundance of hydrocarbon resources. Prior to 1960 agriculture was the dominant sector in the Nigerian economy (Mered, 1997). However, during the first oil boom (1972-1978) oil revenues accounted for almost 85% of the countries total exports and around 60% of government revenues (IMF, 2002). At this stage the government faced the question of how to use such revenues. The worst way of using these revenues has been choosen. The Government ignored the risk of reversal of the current favourable conditions and chose to spend these revenues by undertaking massive domestic investment projects. Public capital spending accelerated rapidly resulting in large budget deficits. As a result of this policy the rate of inflation increased and exchage rate appreciated strongly (Mered, 1997). The same problems were experienced by Nigeria in the second oil boom and in light of the increasing oil revenues, fiscal constraints were relaxed and expenditures rose by 65% in 1980, to resume the suspended construction projects and undertake new ones (Gelb et al., 1988).

Experience of Nigeria shows that the high level of expenditures during oil boom periods was difficult to reverse after price falls, thus resulting in widened fiscal deficits. Fiscal volatility in its turn adversely affects economy through the appreciating real exchange rates (Dornbusch et al., 1993). Obviously that exchange rate appreciation may have negative impact on bank industry. Moreover as a rule all the authority spent the oil income mainly through the local bank industry.

On the contrary a vivid example of overcoming of Dutch disease is the economy of Norway. Norway is the third largest exporter of the oil in the world (Gylfason, 2006). The formula of Norwegian success relies on long-term-oriented tax based strategy to the management of its vast oil resources.

According to legislation all oil deposits on the Norwegian continental shelf belong to the government. Thus, all the rent from oil and gas should accrue to the Norwegian people through their government. The government has unique authority to regulate all the petroleum sector and taxes related to oil industry. By means of a partnership with oil explorers and producers and a strategically focused taxation system and fees since 1980 Norway has manage to accumulate more than 80% of total resource rent.

All revenues from oil are deposited in a Government Pension Fund (previous name Norwegian Petroleum Fund). The fund presently has amassed more than 300 billion US dollars, which is mostly invested in foreign bonds and equities. The main purpose of the fund is to protect the national economy from overheating and to ensure the financial wealth of current and future generations. **It should be mentioned that the fund fulfilled its functions successfully. After the fund's creation Norwegian banking industry have not experienced any** shocks related with volatility of oil prices (Nordic Banking Structure report, 2006).

Similar Funds have been created in many countries. But the main achievement of Norway is that they could manifest political will and readiness to limit the government access to the management of the Fund and the use of these resources for political interests and populist actions. This was achieved by giving the Bank of Norway the highest possible level of independence and transferring the authority to manage Petroleum Fund from Ministry of Finance to The Bank of Norway. This was accompanied by strong fiscal policy focus on modest government expenditures.

There are arguments that variable amount of oil-taxes are still annually used to cover non-oil deficit in the budget of Norway. But unlike many other countries facing an oil boom, Norway has not demonstrated any tendency to expand the central government beyond reasonable limits. Despite almost 30 years of oil exporting today Norway has smaller central government than most of its neighbors which are smaller significantly in comparison to Norway (Gylfason, 2001).

According to Gylfason (2006) another reason of Norway's success is a long history of democratic society, government and transparency. These factors immunized the economy from problems such as corruption, rent seeking behavior, concentration of political power that face most other oil-rich nations.

At the same time even in spite of these achievements some symptoms of the Dutch Disease were detected in Norway economy. These include undeveloped manufacturing industry based on contemporary technologies, passive foreign investment and somewhat weak exports (Gylfason, 2008).

The problems mentioned above that are associated with the Dutch disease consequently have effects on the risks and soundness of the banking system which plays a critical role in the economy.

Concentration is another feature of the banking industry of the oil exporting countries. Actually, in the majority of cases t**he banking systems of oil exporting countries are (Saudi Arabia, Kuwait, UAE, and Venezuela) characterized by high level of concentration. Henry and Boone (2001) have argued that these countries have the high level of Herfindahl-Hirschman Index and this fact makes possible to talk about oligopoly in the banking sector.**

However it is rather interesting that although Norway is considered as the most successful country in overcoming of the typical challenges for oil exporting countries the country could not avoid the problem of concentration in the banking industry. According to the Nordic Banking Structure Report (2006) the two largest banks in Norway, "DnB NOR" and "Nordea", have a combined market share in the banking market roughly five times as large as the combined market share of the three largest medium-sized banks. The largest Norwegian bank, "DnB NOR", have a market share of 36.6%, in terms of total assets, at the end of 2005. "Nordea"'s market share of 13.4% was followed by Fokus Bank (4.6%), Svenska Handelsbanken (3.8%) and Sparebank 1 SR-Bank (3.1%). Thus it is obvious that the concentration ratio is fairly high even in the Norwegian banking sector (source: Nordic Banking Structure report, 2006).

A highly concentrated banking industry, in one or another country, may have negative economic and social implications. According to industrial organization theory, a highly concentrated banking market implies that the banking industry in a country is either monopolistic or oligopolistic, as a few banks would arbitrarily be able to impose excessive or vice-versa low lending interests. It may drive out small and medium banks from the market or make them accept the "rules of the play" dictated by the dominant banks as small and medium banks in this case will not be in position to compete for customers. However it should be taken into account that imposition of high interest rates by the dominant banks may have adversely impact on the quality of their assets. In this situation, it can be assumed that corporations would not be able to get affordable bank loans, and those corporations which get them are forced to generate a considerably high rate of return on their investments that exceed the already high cost of capital. It is obvious that the higher return on their investment means the higher riskiness of investments.

Thus, a financial system may confront problems of adverse selection. Adverse selection occurs before the financial transaction takes place, when potential bad credit risks are the ones who most actively look for a loan. Thus, who wants to assume big risk are likely to be the most eager to get a loan from a bank even at a higher rate of interest, because they are less concerned with paying the loan back (Mishkin, 2007). That is why there is very high probability that the customer who is most likely to produce adverse outcome can be selected as a borrower. As a consequence of adverse selection, banks` customers may have difficulties with repayment of loans and it, in turn, impacts negatively on the quality of assets of banks.

However, it should be particularly stressed that despite of above-mentioned currently there is no common established approach towards the concentration in the banking industry. For example in the frame of investigation of bank concentration ratios and market structure of petroleum economies Essayed (2003) came to conclusion that there are two schools of thoughts on the impact of bank concentration on industry, economic growth and capital accumulation.

The first school is represented by the works of Pagano (1993), Shaffer (1998) and Cetorelli and Gambera (2001). Cetorelli and Gambera (2001) point out that conventional wisdom suggests that any deviation from perfect competition in the banking industry introduces inefficiencies that would harm corporations' access to credit thus hindering growth.

The second school of thoughts is represented by Mayer (1990) and Petersen and Rajan (1995) who provide some evidence on the positive role of concentrated bank industry for economic growth. In this context Petersen and Rajan (1995) have argued that there is a theoretical reason for believing that competitive environment in banking industry may be unfavorable to the formation of mutually beneficial relationships between corporations and specific banks. Since uncertainty about a firm's prospects is high when the firm is young or distressed, creditors in a competitive market may be forced to charge a high interest rate until the uncertainty is resolved. On the other extreme is risk averse banks which do not want to lend money to customers with uncertain future. A monopolistic or oligopolistic creditor, on the other hand, may afford to work with risky customers. Due to their size the oligopolistic banks can even backload interest payments over time, subsidizing the corporations with uncertain future. In other words, in banking industry with oligopolistic market structure banks expose to higher risk than under competitive market.

Essayed (2003) investigated the dependence of concentration, efficiency and profitability of commercial banks in oil exporting countries. The HHI and correlation coefficiency analysis have been used by him as the main tools. Investigations conducted by Essayed (2003) showed that the

profitability of banks is considerably impacted by the level of concentration and the size of oil exports. The study also indicated a lack of competition among banks in oil exporting countries.

Other interesting results have been revealed by stress tests carried out by the IMF in most oil exporting countries (OPEC countries and etc.). According to the results vulnerability of banks is related to change in oil price in international markets.

3. Analysis of risks in oil exporting countries

3.1 Risks of banks in oil exporting countries

Based on literature review it can be concluded that banks may have both direct and indirect exposures to risks. Within the framework of this work "direct exposure" is understood as factors that have been generated by oil revenues and which may have direct impact on the performance of banks. These include exchange rate volatility, inflation, etc. The definition of "indirect exposure" implies the risks that arise as a result of the impact of oil revenues on stakeholders (especially customers) of banks and their market behaviour. For instance changes in the credit rating of borrowers may result in loan losses, exposures due to inflation, irrational depositors may have unusual consumer behaviour, or due to risk magnification the government may toughen regulatory requirements.

It is also not the aim of this work to describe all kind of risk that banks may face but to focus on only on some special risks which will be inevitably impacted by the effect of oil-revenues. All other kinds of risks are considered to be outside the scope of this work.

3.2 Exchange Rate Risk

In the classic manifestation of the Dutch Disease, the exchange rate is considered to be the main risk factor for the banks. The higher production of oil stipulates the higher revenues of petrodollars. Pouring these revenues into the economy causes appreciation of a local currency of the petro states. On the other hand modern tendency of instability of oil prices (price keep rising, however it is volatile) aggravatingly provokes fluctuation of exchange rates. This requires from banks operating in the oil exporting countries to place a strong emphasis on the management of exchange rate risk. The case of Azerbaijan is a vivid example. During the last several years since its involvement in large oil exports, the local currency has shown volatility but has tended to appreciate.

This can be explained by several reasons. The first one is the size of economy in comparison to revenues. According to different assessments (IMF, EBRD, and independent experts) revenues expected during the future 10 years will account for the figure in diapason between 150 – 350

billion dollars. For comparison it should be noted that the current state budget of the country amounts to $12.7 billions (Ministry of Finance of Azerbaijan, 2008).

The second reason is related with expectations of market participants. In this context it would be reasonable to apply to the concept which considers the exchange rates as an asset price. The "asset market" approach to exchange rates has long recognized that exchange rate movements are primarily driven by news that changes expectations (Devereux and Engel, 2006). Thus market participants knowing about huge future inflows of foreign currency do not hasten to invest their funds in foreign currency which keeps depreciating therewith.

Another reason is a relatively small foreign currency market in Azerbaijan. Obviously, in this case supply of a foreign currency exceeds demand. In order to demonstrate the tendency in the foreign exchange market (in the context of supply and demand) before and after involvement in the huge oil projects it would be reasonable to apply to the figures which reflect amount of all transactions in Azerbaijani cash foreign exchange market (non-cash and transaction through international market have been excluded).

One peculiarity should be taken into account that according to the local legislation all cash transactions related with sell and purchase of foreign currency can be conducted through the banks only (National Bank of Azerbaijan, 2002).

(thousn.US$)

	USD Sold by banks	USD Bought by banks
2004 (before huge oil projects)	1 173 998,3	855 671,4
2008* (after)	777 060,1	1 910 196,4

*From January till June (Source: National Bank of Azerbaijan, 2008)

Clearly, that the cash foreign exchange market does not cover all transactions, however it is definitely demonstrates the general tendency in the market. As it seen from the table after involvement in the huge oil projects the tendency in the market has changed in reverse direction.

Apart from above mentioned reasons it should be noted that in spite of accumulation the main oil revenues in the established State Oil Fund, the government makes huge transfers from the fund to the state budgets in order to cover expenses related with social programs. According to the official report of the State Oil Fund (2008) only in the first half of 2008 the amount equals $1,5 billion has been transferred from the Fund to the State Budget for further distribution. It is clear that revenues in the fund are accumulated in dollars that is why before transaction the dollars reserves must be converted into local currency (manat). The conversion transaction stipulates

additional supply and serves as an additional stimulus for further appreciation of the local currency (manat).

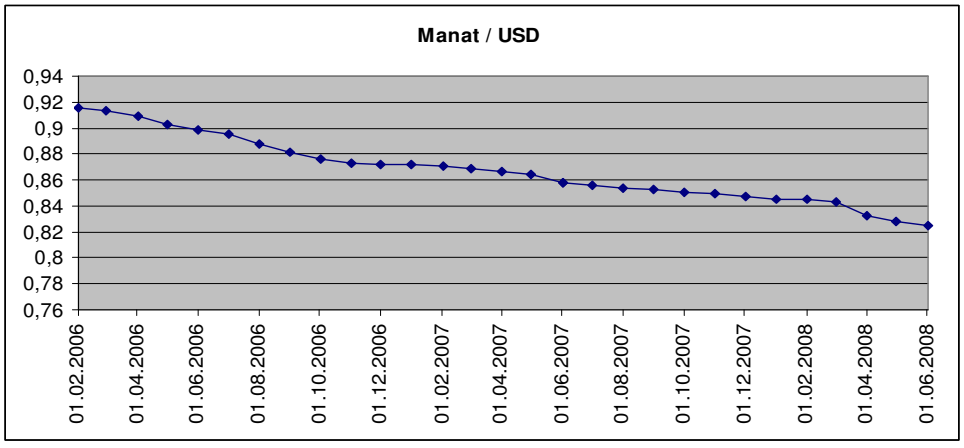
It is also can be assumed that external factors such as demand and market price of crude oil in the international market are another reason which influence on the exchange rate of manat (local currency). Even if the volume of produced oil is relatively stable, the increase in the price of crude oil causes additional inflow of petrodollars in the country increasing dollars` supply in the local market. Thus it can be concluded that the higher price of crude oil in the international market the stronger local currency (keeps appreciating versus dollar)

In order to test our assumption **correlation coefficiency** calculations, on the relationship between oil prices in the international market and exchange rates, have been conducted**.**

		Oil price	Exchange rate
Oil price in the international market	Pearson Correlation	1	.723(**)
	Significance(2-tailed)	.	.000
	N	30	30
Exchange rate (manat)	Pearson Correlation	.723(**)	1
	Significance(2-tailed)	.000	.
	N	30	30

Thus the calculations demonstrate a statistically significant positive correlation 0.723 between oil prices and Manat/USD exchange rate for the last 60 months (from 01.01.2003 – 01.07.2008). In other words the oil prices in the international markets and the rates in Azerbaijani local foreign exchange market move in the same direction. Now it can be argued that assumption made above has been proved.

The chart bellow demonstrates the trend of exchange rate Manat /USD



Moreover even after two years of sustainable appreciation, according to IMF report (2006) the Azerbaijani currency is still at least 15% undervalued. The main reason of undervaluation is the

National Bank of Azerbaijan's periodical intervention in the currency market in order to exclude sharp appreciation of the local currency.

It should be stressed that according to the international approach to exchange rate risk in the context of financial industry it is defined as the effect of unexpected exchange rate changes on the value of bank or other financial corporation: the possible direct or indirect loss in the bank's cash flows, assets and liabilities, net profit and, in turn, its stock market value from an exchange rate move (M. Papaioannou, 2006). In order to be in position to manage exchange rate risk a bank needs to determine the specific type and sources of currency risk exposure, the hedging strategy **and the available instruments to** deal with these currency risks. As for the sources of the foreign exchange risk they can occur as a result of trading in foreign currencies, making foreign currency loans, buying foreign issued securities or issuing foreign currency-denominated debt as a source of funds. Other important aspect of the management of foreign exchange risk is to identify the type of risk that a bank is exposed to and the amount of risk encountered. Shapiro (1996) has defined three main types of exchange risk which should be considered by the bank in the frame of exchange rate risk management.

The first one is a **transaction risk,** which is basically cash flow risk and deals with the effect of exchange rate moves on transactional account exposure related to receivables (assets), and payables (liabilities). An exchange rate change in the currency of denomination will result in a direct transaction exchange risk to the bank.

The second one is a **translation risk** which is basically balance sheet exchange rate risk but in the context of a foreign subsidiary. This risk has a particular importance for banks which has foreign subsidiary and balance sheet of the subsidiary may significantly affect the parent company in the process of consolidation of a foreign subsidiary to the parent company's balance sheet. However it should be stressed that to some extent the scope of translation risk can be linked to the accounting regulations. In consolidating financial statements, the translation could be done either at the end of the period exchange rate or at the average exchange rate of the period, depending on the regulations (Papaioannou, 2006). Hence, while income statement are usually translated at the average exchange rate over the period, **balance sheet** exposure of foreign subsidiaries are often translated at the current exchange rate at the time of consolidation

The last but not least is an **economic risk**, which basically related with the risk to the bank's present value of future operating cash flows from exchange rate fluctuations.

Identification of the various types of currency risk along with their sources is essential to develop a strategy for managing currency risk.

In the context of Azerbaijan the reasons which stipulate further appreciation of the currency are rather obvious and have been explained above. Moreover, revealed strong correlation between oil prices and the exchange rate, volume of production and exchange rate makes the further development of appreciation trend very predictable at least till 2015 when oil production will reach its peak in Azerbaijan.

Based on the description of the reasons and types of the foreign exchange risk it can be concluded that **transaction risk is prevailing** in Azerbaijani banking sector. Analysis of Azerbaijani bank industry showed that all banks in the system have the open currency position (maximum 15%, ratio between amount of open currency position and regulatory capital). While the open currency position of the majority of banks are within the limit set by the National Bank, the open currency positions of the state own banks (the biggest banks in the system) are constantly out of the limit set up by the National Bank. The main reason of such a confidence from the side of Azerbaijani big banks is a certain predictability of the future trends of the exchange rate.

However it should be particularly stressed that predictability of the exchange rate has different effects on banking system and risks in the whole:

1) The first impression is that the predictability reduces the risks of banks. It also makes possible for banks to restructure their balance sheets in a way that makes possible to benefit from the appreciation of the local currency. **For instance, during last 2 years 25 out of 45 banks changed their foreign exchange position from long to short in US Dollars and from short to long in Manat (local currency). Similarly the proportion of foreign currency denominated loans in the portfolio of the whole industry was reduced from 64% to 49%.**

But, there is still topical question "does it really solve the foreign exchange risks problem in the industry". Analysis of the figures as of 01.06.2008 showed that 19 banks still **have to keep long open currency position in a foreign currency**. In the frame of the analysis conducted for the current paper, it can be attributed with certain level of confidence to the symptoms of the Dutch Disease when importers behave more actively in order to take advantage of the benefits of the appreciation of the local currency. Hence, banks with a large portion of customers involved in import transactions in the majority of cases have to keep long position in foreign currencies, especially in US dollars due to necessity to provide customers with loans in foreign currency. Clearly that for the customers such loans are very attractive taking into account the sustainable trend of appreciation of the local currency.

To some extent it is obvious that the only way to reduce exposure is to use hedge practices. However the problem is that high level of exchange rate predictability leaves no room for using

hedging derivatives such as swaps, options and futures. Hence, the banks with exposure can not hedge their positions. This fact, in turn, obstructs the development of the derivatives market and intermediate institutions like clearing houses. In practice there are limited amount of operations with complicated derivative instruments in inter-bank market in Azerbaijan. In order to offset possible losses from the exposure there are several banks in the industry using the government's treasury bills and Central Bank's notes which are characterized with high level of profitability.

Clearly that operating under the absence of hedging instrument, the banks have to somehow protect themselves from appreciation of Manat (local currency). Therefore some banks have increased the interest rates on foreign loans. For instance according to the latest (01.04.2008) press release of the National Bank average annual interest rates for loans in local currency and in foreign currency were respectively 21.20% and 20,61%.

Another solution that has been found by the banks is to enter into forward agreements on buying of the appreciating national currency from the large borrowers who request loans in foreign currency. The forward agreement is usually considered as a precondition for a loan. Banks using this approach try to avoid the currency risk from appreciation of the local currency and **transfer it to borrowers**.

In order to resolve and mitigate the exchange rate risk non-standard approaches should be used. Scatinga and Tovar (2007) have argued that **Securitisation** can be used for transformation risky assets into less risky ones.

In this context securitization would be very appropriate tools for Azerbaijani banks to reduce exposure (currently this instrument is not used in the industry). Application of securitization will make it possible to securitize the part of the loan portfolio denominated in foreign currency and thus reduce the exposure. Obviously, that in result of securitization a bank can acquire liquid assets (cash) in foreign currency; then the cash can be converted into local currency (manat) and used to finance Manat denominated loans**.**

Using above mentioned tool a bank can reduce dollar exposure and also receives gain from further appreciation of local currency.

3.3 Interest Rate Risk

The interest risk is not directly related to export of oil resources by a country. However experience of oil exporting countries shows that indirectly oil export has an inevitable impact on the interest risk of banks as well.

The problem arises due to effect of the Dutch Disease on individual consumer behavior. Bank customers are concerned about inflation expectations and therefore, they are less interested in

savings in their deposit accounts. Hence, to maintain a growth of deposit base banks have to increase their interest rates. According to the National Bank's statistics (2008) for the last two years (since the beginning of the period of high inflation) average interest rates for 1 year deposits increased from 7.28% to 12.22% and some banks in isolated cases offer even 20% annually.

The rates paid by banks to current accounts increased up to 6.7% annually (National Bank of Azerbaijan, 2008). Such unprecedented growth of interest rates is a matter of particular concern of the supervisory authority due to high probability that banks are not prepared to manage upcoming interest rate risk.

The increasing interest rates under conditions mentioned above cause problems related with **asymmetric information**. This in turn can result in **adverse selection problem**. Adverse selection problem may lead to **credit rationing** in which some borrowers are refused loans even if they agree to pay a higher interest rate (Stiglitz and Weiss, 1981). This happens because as interest rates rise, prudent borrowers are more likely to decide that it would be reckless to borrow at such a high interest rate. On the contrary, borrowers with the riskiest investment projects are often those who are willing to pay the highest interest rates, because if the high risk investments succeed, the potential borrower will be the main beneficiary. In this context, it is possible to conclude that a higher interest rate leads to even greater adverse selection because the higher interest rate increases the probability that a bank makes loan to an unreliable or irresponsible borrower.

The same concept of adverse selection can be applied to the bank industry itself as in the course of competition some financial institutions in order to attract deposits may increase irresponsibly the interest rates for deposits and thus increasing the riskiness of the whole industry. Naturally, that such behavior must be in the focus of attention of the Supervisory Authority.

Hence, the higher interest rates can be considered as an additional factor which may undermine the stability of banking industry. Adverse selection may significantly impact on the quality of assets of bank industry within the timeframe of increasing interest rates. On the other hand due to the fact that lenders recognize that higher interest rates mean a dilution in the quality of the potential borrowers they may react by taking a step back from their business of financial intermediation and limiting the number of loans they make.

Structure and value of bank balance sheets may be also affected by increase in interest rates. Nowadays classical banking approach to borrowing and lending at the same maturity has changed and currently banking business implying "borrowing short and lending long" is spreading very rapidly (Mishkin, 2001). That is taking deposits which can be withdrawn on

demand and making loans that will be repaid over longer periods, sometimes even more than five years. Briefly it can be presented as the state of a balance sheet where assets of a bank have longer duration than its liability. Azerbaijani banking industry is not an exception in this context.

Based on the information acquired from the National Bank of Azerbaijan consolidated balance sheet of the whole industry has been created, then accumulated assets and liability of the whole industry has been drawn up, afterwards analysis of the accumulated assets and liabilities has conducted. In the final analysis, it was revealed that almost in all periods of the year the industry has huge gaps between short term assets and liabilities (please see table below).

(mln. USD)

	0-30 days	31-90 days	91-180 days	181-365 days
Assets (including credit portfolio)	**1 484 645,3**	428 944,1	525 017,8	1 059 088,0
Liabilities (including deposits till demand)	**2 602 865,6**	453 680,0	538 375,7	1 900 536,7
Assets - Liabilities	**(-1 118 220,3)**	(-24735,9)	(-13357,9)	(-841448,7)

Existence of the huge gap together with a rise in interest rates can cause a significant decline in **the net worth of every single bank and industry in whole**. It can happen because in present value terms, the interest rate rise lowers the value of assets with their longer duration more than it raises the value of liabilities with their shorter duration.

Another current tendency which is applicable to the oil exporting countries with the stable political situation is that increasing financial wealth of the nation positively impacts on the creditworthiness of the country and its credit rating. In this context Karl (1999) have argued that interests of foreign and local bankers coincide and thus oil exporting countries borrow more and at a faster rate than the countries not dependent on oil revenues. As a result the local banks in the oil exporting countries, which historically relied on internal resources, now have access to the international loan markets with lower but variable (usually LIBOR) interest rates. **Consequently, banks now have interest rate risk exposure not only to local but also to the international economic arena.** For instance, according to the National Bank of Azerbaijan (2008) for the last 2 years the amount of loans attracted from the international financial institutions by Azerbaijani banks has grown almost 5 times (470%).

On the other hand it should be particularly stressed that increasing competition among banks of middle size (as it was mentioned there are 45 banks in the country) leads to a decrease of interest rates at which corporations and physical persons can borrow. This tendency consequently leads

to decline in **the interest rate spread (t**he gap between the interest rate a bank pays on deposits and the higher rate it charges for loans) of banks.

Moreover in terms of interest rate risk a government's populist economic policy is another threat observed in oil exporting countries. The access to easy money weakens traditional work ethics and reduces incentives for entrepreneurship, lowering financial discipline within bureaucracies and leading to reckless budgetary and funding policy (Karl, 1999). Common examples of such policies are the transference of huge financial recourses from the state budget to subsidize entrepreneurs and farmers in the form of low rate loans.

Such subsidies have two effects on interest rates: **Firstly** they directly reduce the average interest rates in the market. **Secondly** they have psychological effect on borrowers and create the problems associated with **moral hazard**. Borrowers get used to cheap funding and do not want to take loans with rates relatively higher than government rates or apply for funding only within some government loan campaigns which have an almost ongoing nature. According to statistical information provided by the National Bank of Azerbaijan for last 12 month, 11% of the growth of loans portfolio has been financed by means of low rate government loans to entrepreneurs and farmers.

In accordance with the economic theory (during stagnation interest rates go down) it is also clear that in oil exporting countries a fall in interest rates usually happens just after the beginning of a decline in oil exports. Thus banks keeping long position (interest sensitive assets more than interest sensitive liabilities) in interest rates can experience pernicious transitional period when the peak of oil export is replaced by declining phase.

Therefore, banks should be aware of risks mentioned above in advance and adjust, if necessary, their interest rate policy and restructure their balance sheet. Unfortunately long term trends with low standard deviation in these countries usually cause risk myopia.

3.4 Liquidity risk

Liquidity or the ability to fund increases in assets and meet obligations as they come due is critical to the sustainable viability of any banking organisation and industry in whole. Banks are especially susceptible to failures because their assets are typically long term and non-marketable while their liabilities have high turn-over rates and pay a variable interest (Jungblut, 2004). Therefore banks are prone to sudden withdrawals of funds which can quickly impair their liquidity position. Thus liquidity is among the most important issues which are being addressed by banks on a daily bases.

Beside specific exposure to the risks discussed in the previous chapters, the banking systems of oil exporting countries usually have specific characteristics, which in the most cases, distinguish them from other banking systems in emerging markets. Analysis of several oil producing countries, conducted in the frame of the current project, showed that in countries with a booming phase of oil export (Russia, Kazakhstan, Saudi Arabia) banks usually have unnecessary, excess short term liquidity **(ratio between liquid assets and short term liabilities).**

Azerbaijani banking industry has been demonstrating very high liquidity ratio. According to the information acquired from the National Bank of Azerbaijan for the last 5 years the average short term liquidity ratio in the industry is around 75-77%, while the minimum regulatory requirement set up by the National Bank of Azerbaijan is only 30%. In the banks of Kazakhstan the same ratio increased from 87% in 2002 to 118% in 2007.

The main reason for high liquidity in Azerbaijani bank system is that banks have limited possibilities to reinvest petrodollars poured into economy by the Government. The security market of Azerbaijan is at an embryo stage of development. Thus for many banks lending is the single way to reinvest petrodollars. This conclusion can be extended to almost all emerging oil exporting economies.

As it has already been mentioned in the previous chapter the interest rates in Azerbaijani market is relatively high, therefore banks recognize that higher interest rates implies a dilution in the quality of the potential borrowers and react by cutting the amount of credits or limiting the number of loans they make.

This fact may create additional problem for banks as in this case they can not provide effective utilization of attracted funds and thus face uncovered cost burden. Sound liquidity management is the only way which can reduce the probability of serious problems. Clearly that the importance of liquidity transcends the individual bank, since liquidity shortfall at a single can have system-wide repercussions (Basel Committee on Banking Supervision, 2000). For this reason, the analysis of liquidity requires not only to measure the liquidity position but also to examine how funding requirements are likely to evolve under various scenarios.

Taking into account the above mentioned and in order to define the main **liquidity sources** in Azerbaijani banking industry calculations based on the figures acquired from the National Bank of Azerbaijan have been conducted.

Consolidated balance sheet of Azerbaijani banking industry **(mln. USD)**

	01.06.2007	01.06.2008	Sources	Uses
1	2	3	(2-3)	(2-3)
Assets				
Cash	220,9	300,5		79,6
Correspondent Accounts	432,3	694,7		262,4
Credits to customer	3274,7	6201,1		**2926,4**
Investments	315,7	480,1		164,4
Other assets	415,0	632,1		217,1
Total Assets	**4658,6**	**8308,5**		**3649,9**
Liabilities				
Deposits	**2521,6**	**3738,9**	**1217,3**	
Credits from financial sector	**1078,7**	**2253,3**	**1174,6**	
Other Liabilities	290,7	966,9	676,2	
Capital	767,6	1349,4	581,8	
Total assets	**4658,6**	**8308,5**	**3649,9**	

Assertion that the main direction of resources is credit portfolio has been proved as the majority of attracted resources (2926, 4 mln.USD) have been invested in credit portfolio.

From the table above it can be also concluded that the main source of liquidity in Azerbaijani banking industry is deposits of customers and credits borrowed in financial markets. This is typical for the oil exporting countries as the Government spends huge amounts of petrodollars and then petrodollars returns in the banking industry through deposits. In this context Deavaux (2006) has argued that oil revenues have an impact on banking liquidity at two levels: directly via public spending and indirectly via the money multiplier, since part of the liquidity injected into the economy ends up in the banking system.

However it should be stressed that reliance on deposit base as the source of liquidity is rather dangerous practice.

In order to assess the sustainability of Azerbaijani banking industry **stress test** in relation to liquidity of the whole industry has been conducted. The stress test for liquidity risk evaluates the resilience of the banks towards the fall in liquid liabilities. The ratio "liquid assets to liquid liabilities" is calculated before and after the shocks by dividing the liquid assets with liquid liabilities. Liquid assets are the assets that are easily and cheaply turned into cash. They include cash and balances with banks (correspondence accounts), call money lending, lending under repo and investment in government securities. Liquid liabilities include the deposits till demand and the borrowings with short term maturities. The liquid liabilities are given shocks of 10%, 20% and 30% fall. The equivalent amount is deducted from the liquid assets assuming the fall in liquid liabilities is met by the corresponding fall in the liquid assets. The ratio of liquid assets to liquid liabilities is recalculated under each scenario. The data as of 01.06.2008 has been acquired from the National Bank of Azerbaijan.

Liquidity shock

The ratio of liquid assets to liquid liabilities after a 10% fall in the later is calculated as:
Liquid assets = 653,2 mln.USD
Liquid Liabilities = 1243,4 mln.USD
Fall in liquid liabilities = $1243{,}4 \times 0.1 = 124{,}3$
Revised Liquid Assets = 653,2-124,3=528,9
Revised Liquid Liabilities = 1243,4- 124,3=1119,1
Revised Ratio (%) =47,2%

The analysis has been summarized in the following format:

Magnitude of Shock	**10%**	**20%**	**30%**
Liquid Assets	653,2	653,2	653,2
Liquid Liabilities	1243,4	1243,4	1243,4
Fall in the Liquid Liabilities	124,3	248,7	373,1
Revised Liquid Liabilities	1119,1	994,7	870,4
Revised Liquid Assets	528,9	404,5	280,1
Ratio after Shock (%)	**47,2%**	**40,7%**	**32,2%**

It should be noted that according to the requirements of the National Bank of Azerbaijan the minim liquidity ratio must be 30%. Thus the banking system of Azerbaijan has demonstrated sustainability under shocks. However stress test does not have possibility to take into accounts abrupt changes in the macroeconomics presents approximate picture in statics.

Moreover, conducted research has revealed a paradox in the strategy of banks operating in oil exporting countries. On the one hand they do not have capacity to provide adequate reinvestment of attracted funds. On the other hand the banks still compete with each other and increase interest rates on savings (described in previous chapters) thereby making heavier their cost burden.

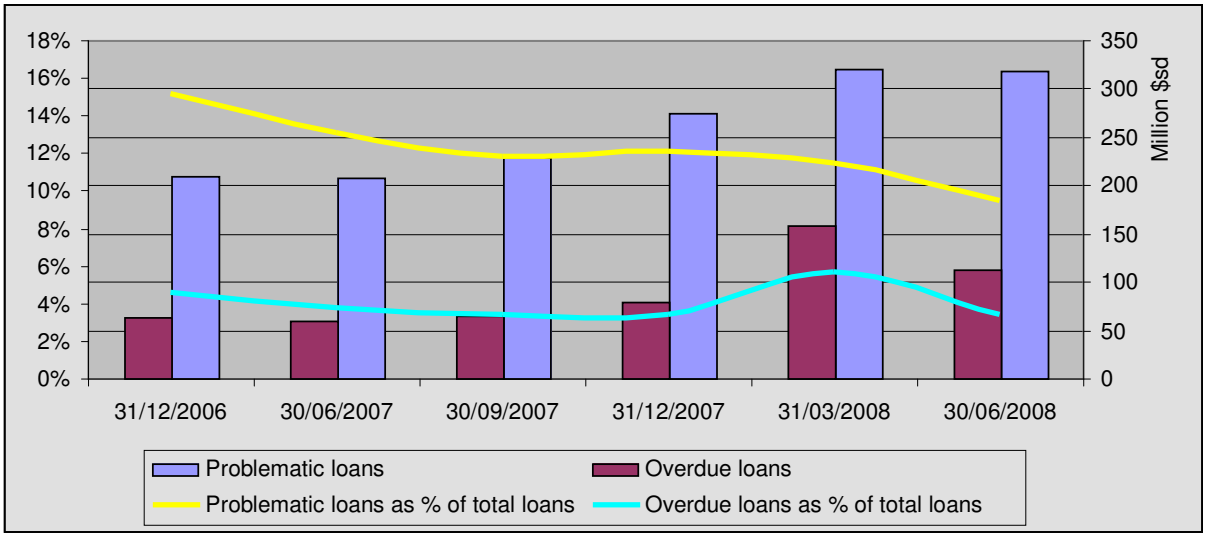
3.5 Rapid growth and Credit Portfolio risks

An oil boom in any country is always associated with an increase in the nominal wealth of the public. Such a tendency makes financial products more asked-for and lead to the second boom in the financial system and especially in the banking system.

Azerbaijani involvement in large oil exports stimulated unprecedented growth of the local banking system in terms of growth of liabilities and assets**.** Over the last several years the banking system increased in average by a 50-60% annual growth rate. The last 12 months, from July 2007 to July 2008, banks growth rate reached an even higher rate of 80%. The capitalization increased by around 80.3% during the same period of time. Increase in attracted deposits amounted to 109.0%. Significant growth of 470% (during the last two years) was defined in loans from international financial institution. Such a rapid expansion of source of funding from deposits, international markets and additional capitalization inspire the banks to activate lending and investment. Over the last 12 months the total loan portfolio of banks has increased by more than 78% and investment portfolio around 100%.

The main problem associated with such a rapid increase also referred as “growth risks”. That are risks banks sometimes are not ready to manage due to sharp increases in amount of loan portfolios. This is stipulated by the fact that often quality and capacity of lending do not follow growth of lending. Lending process is accompanying by deterioration of potential borrowers analysis and loan assessments, monitoring and due diligence procedures which in their turn increase credit risk exposure.

The problem is also complicated by the fact that very often the value of non-performing loans is visually concealed. Because, due to extremely high growth rates of loan portfolio the proportion of non-performing loans seems stable or even decreasing while their value increases in line with loan growth rates. The chart bellow demonstrates the same situation in the Azerbaijan banking system.



It is obvious from the chart that even the proportion of problematic and overdue loans in total loan portfolio have decreased or been stable relative to the nominal value of these loans due to active lending the total quality of the portfolio seems to remain satisfactory. In reality it reminds a "time bomb". The increasing value of problematic and overdue loans indicates a weakness in management or effectiveness of working with bad loans and appraising of new borrowers. From the other side, taking into account that most loans have been issued recently it will take some time before they begin to show evidence of adverse behaviour.

The losses from deterioration in the quality of credit portfolio **can be covered at the expense of banks` capital** and thus substantial contraction of their **capital will be** observed in the future. The industry (bank industry) has only two choices: either cut back on their lending or try to raise new capital. However there is another side of the coin: when bank experiences deterioration in the quality of the assets (say credit portfolio) it is very "hard for them to raise **new capital at a reasonable cost"** (Mishkin, 2001). Thus the typical response of financial institutions with low asset quality is a contraction in lending, which obviously will slow economic activity.

The situation can be considered as a typical one for a resource exporting country in the post boom period. The huge amounts of petrodollars were poured into economy during boom period and thus a banking system had to "digest" the money. Result: the money had been invested even in doubtful projects which later would turn into low quality assets for a bank.

To understand the relationship between the rate of increase of the loan portfolio and an increase in problematic loans a simple linear regression models were tested. Models showed following relationship:

	TEST
Dependant variable (Y):	% growth of problematic loans
Independent variable (X):	% growth of loan portfolio
Time series:	01.01.2007- 01.07.2008 (monthly)
	RESULTS
Slope	0.26
y-intercept	2.56
t-values	0.5202
Final formula	Y= 2.56+ 0.26X

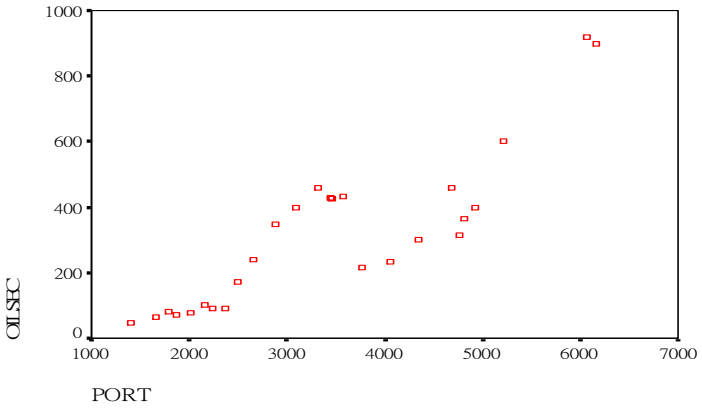
The results of the TEST reveal that the slope or sensitivity of the increase of problematic loans is not so significantly impacted by growth of total portfolio. As explained before this is probably because of most loans are new and only after some period of time they may show adverse behaviour. But the test also indicates that even if the portfolio will have zero growth rate the problematic loans still continue to increase with the rate of 2.56% per month. The results suggest that under conditions of higher growth rates of loan portfolio, banks do not have enough capacity to provide adequate maintaining of credit appraisal and monitoring procedures.

Other problems are related directly with oil industry of Azerbaijan. Currently due to boom in oil prices the industry has a leading position both in the country inside and outside in the international market. Thus the industry turned into the main borrower in the internal and external markets. It has already been mentioned that currently Azerbaijani banking industry is characterized by the high pace of growth. However it also should be stressed that the local oil industry contributes to this growth directly. In order to define the correlation between the growth of credit portfolio and lending to oil industry correlation coefficiency analysis has been conducted:

		Banks credit portfolio	Credits to oil sector
Banks credit portfolio	Pearson Correlation	1	.869(**)
	Significance(2-tailed)	.	.000
	N	26	26
Credits to oil sector	Pearson Correlation	.869(**)	1
	Significance(2-tailed)	.000	.
	N	26	26

Thus the calculations demonstrate a statistically significant positive correlation 0.869 between increase of credit portfolio of the whole Banking Sector and credits to the oil sector of Azerbaijan. The calculations have been conducted on the data for the last 30 months (from 01.01.2006 – 01.07.2008). In other words the growth of the credit portfolio of Azerbaijani bank industry and amount of credits to the oil industry move in the same direction.

The mentioned correlation can be also demonstrated visually by means of scatter plot:



Where *Port* means – portfolio of the banking industry,
Oil Sec – Loans to oil sector

Based on the above-mentioned it can be concluded that for the time being the quality of credit portfolio of banking system of Azerbaijan, to some extent, depends on the oil industry. The table below demonstrates the figures which allow to envisage the picture of the current year:

Year (2008)	Credit Portfolio ($USmln.)	Loans to oil industry ($USmln.)
January	4758	314
February	4812	365
March	4932	400
April	5216	600
May	6064	920
June	6166,5	900

(*Source: National Bank of Azerbaijan, 2008)*

At the same time there are other factors which inflame the credit risks of banks besides growth risks. Banks should always keep under the consideration that as a result of progressive Dutch Disease, importers will benefit from the appreciation of local currency while manufactures and exporters in contrast will suffer from it.

The latter may be a significant problem for the creditworthiness of exporters and of course may expose banks to loan losses to these type of companies. Therefore, banks operating in oil exporting countries should avoid standardized credit procedures and implement a risk focussed credit policy that enables it to separate the risks of borrowers which are importers or exporters due to their different nature.

Benjamin, Devarajan, and Weiner (1989) argued that in the conditions of Dutch Disease segments of economy may have different risk exposures. For instance they demonstrated that in most cases the agricultural sector will suffer more than other sectors. Therefore banks may reconsider their credit policy regarding the agricultural sector and implement tougher risk limits, credit procedures and monitoring. It also becomes necessary to strive for the maximum diversification of the portfolio.

3.6 Inflation

Inflation is one of the negative effects that often accompany the Dutch Disease. There are several reasons that cause inflation to accelerate in oil exporting countries.

Firstly, the Dutch Disease destroys the local manufacturing industry stipulating its uncompetitiveness due to appreciation of the local currency. Hence, to cover their losses local manufactures have to increase prices in local markets.

Secondly, the international experience shows that countries experience an oil-boom face an enormous increase in the nominal incomes of individuals who work for a booming industry and

consequently consumer demand of these individuals increases sharply. Increasing consumer demand under the circumstances of such a kind results in higher inflation.

Thirdly, to ease the threat of currency appreciation a Central Bank has to "sterilize" foreign currency base in a domestic market. Thus, capital inflows result in a build-up of foreign exchange reserves. As these reserves are bought at the expense of domestic currency, the domestic monetary base expands without a corresponding increase in production: too much money begins to chase too few goods and services.

Fourthly, Authorities counting on high current and future income, expenditures are brought into line with anticipated high-income level within a relatively short period of time.

Inflation may have different threats to the business of banks. It reduces the value of banks' assets, profit and some products. As a result it may be not reasonable to continue selling some product lines. On the other hand, **inflation impact consumers' behaviour inspiring them to spend rather than to save**.

To understand the impact of the inflation on the performance of the banks in Azerbaijan the **coefficients of correlation** between the monthly inflation rate and the main indicators of bank profitability (profit margin, return on assets and spread ratios) were estimated for the period of the last 30 months.

Correlation coefficients between inflation and selected financial indicators of banks in Azerbaijan (January 2006- June 2008)

	Average banking system	Public Banks	Private Banks
Spread	-0,79	-0,25	-0,81
Profit Margin	-0,53	0,21	-0,59
Return on assets	-0,10	-0,02	-0,10

From the results it is obvious that the test did not demonstrate strong correlation between inflation rate and performance of the banks in Azerbaijan. However it is also obvious that the Public banks and the private banks react to inflation absolutely differently.

For instance, in case of the spread ratio private banks demonstrated almost triple the negative level of correlation with inflation than public owned banks. It can be assumed that it is related to the fact that public banks are much bigger and in the majority of cases they serve to the public owned corporations including State Oil Companies. Taking this into account the public owned banks are more flexible in changing spread between deposits and credit portfolio and interest rate policy in general. Or in other words the customers of Public owned banks are less sensitive to changes in interest rates.

As for the private banks it can be assumed that under increasing inflationary conditions customers are less interested in saving, therefore private banks, in order to survive in competition with public banks, must maintain low spread irrespective of the inflation rate.

Another aspect which should be stressed is that in case of profit margin and return on assets ratio public banks demonstrated absolutely opposite results in comparison with private banks as well. Results indicate that public banks benefit from higher inflation in terms of profit margin. According to Mr. Alekperov (interview, 2008) Deputy Director of the Banking Supervision Department at the National Bank of Azerbaijan, this relationship can be explained as follows: "The high inflation is associated with high expenditures by government and government entities. Taking into account the most government accounts are served by public banks these banks benefit more from the fees and commissions when the government increase expenses. Moreover, this process **is accelerated by the fact that public banks rely on the oligopoly power and so charge extremely high fees and commissions**"

In expectation of continued revenue from the resource boom, authorities undertakes ambitious public domestic as well as foreign investments projects as a rule with low economic rates of return, politically attractive payoffs, inadequate screening and undiversified risk. Naturally that for authorities it is more convenient to conduct all these transaction through the public owned banks. And of course in the context of huge revenues these expenditures are considered as "incidentals".

The possible solutions for reducing inflation burden for banks may be to use so called exotic derivates based on official inflation rate such as exotic swaps or options. Taking into account the further expectation of high level of inflation the swap or options with cap may be particular effective.

3.7 Public Oligopoly

The banking systems of the most oil exporting countries are (Saudi Arabia, Kuwait, UAE, and Venezuela) characterized by high concentration. According to Henry and Boone (2001) these countries have the high level of Herfindahl-Hirschman Index - a commonly accepted measure of market concentration and it makes possible to talk about oligopoly in the banking sector.

Wilkinson (2005) describes the oligopoly in the market when only a few firms dominate the industry. **According to Wilkinson (2005) the main conditions which stipulate the existence of the oligopoly are relatively small number of firms account for the majority of the market, significant barriers to entry and exit, interdependence in decision-making.**

It is obvious that the banking industry is characterized by the significant barriers to entry. Moreover if the bank is "too big to fail" it means that the state authority will try to assist it in case of trouble in order to avoid "domino effect". Thus exit from the industry is also related with relatively significant barriers.

In order to define the market structure of Azerbaijani banking industry calculations of ***four-firm concentration*** ratio and ***Herfindahl-Hirschman Index (HHI)*** based on the data acquired from the National Bank of Azerbaijan as of *01.10.2007* and *01.06.2008* have been conducted:

1. Calculation of *four-firm concentration ratio* has been conducted as the fraction of four largest banks according to their assets in the industry and total assets of the banking system of Azerbaijan (Baye, 2004)

01.10.2007

Name of Bank	**Assets (mln. US dollars)**
International Bank of Azerbaijan	**2345,3**
Bank Standard	**550,9**
Unibank	**318,1**
Texnika Bank	**289,7**
Total assets of the whole Banking system	**5820,0**

Four firm ratio equals 0.6 [(2345,3+550,9+ 318,1+289,7) / 5820]

01.06.2008

Name of Bank	**Assets (mln. US dollars)**
International Bank of Azerbaijan	**3 500, 3**
Bank Standard	**650, 4**
Unibank	**452, 3**
Texnika Bank	**371, 2**
Total assets of the whole Banking system	**8 316,3**

Four firm ratio equals **0.6** [(3500,3+650,4+452,3+371,2) / 8 316,3]

Based on calculations it is clear that as time has passed the market structure of the banking industry tends to be concentrated and oligopolistic.

2. *Herfindahl-Hirschman Index* is considered as a commonly accepted measure of market concentration. Calculation has been conducted by squaring the market share of each bank competing in the market and then summing the resulting numbers (Methodology used by US Department of Justice for market control).

Currently 45 banks have the licence for implementation of banking activity in Azerbaijan. However, assets division among them is disproportionate:

Number of Banks	Share of assets
1	**> 40% of the whole market**
2	**5%>A>10%**
15	**1%>A>5%**
Other 27 banks	**Less than 1% of the market**

Calculation of **HHI***:*

	Bank	Amount of Assets in thous. USD	Market share in %	Squared Market share
1	International Bank of Azerbaijan	3 500 321,5	42,1	1771,6
2	Bank Standart	650 471,8	7,8	61,2
3	UNI Bank	452 343,1	5,4	29,6
4	Texnika Bank	371 254,2	4,5	19,9
5	Capital Bank	307 981,3	3,7	13,7
6	Bank Respublika	295 045,3	3,5	12,6
7	Khalq Bank	280 516,8	3,4	11,4
8	Azeriqaz Bank	189 111,0	2,3	5,2
9	Azerdemiryol Bank	180 298,3	2,2	4,7
10	Bank of Baku	171 389,1	2,1	4,2
11	Nikoyl Bank	164 270,0	2,0	3,9
12	Micro Finance Bank	155 984,4	1,9	3,5
13	Pasha Bank	147 440,6	1,8	3,1
14	Ata Bank	115 334,1	1,4	1,9
15	Bank of Azerbaijan	107 153,4	1,3	1,7
16	Rabita Bank	94 658,4	1,1	1,3
17	Zamin Bank	87 855,0	1,1	1,1
18	Mugan Bank	84 219,6	1,0	1,0
19	Yapi Kredi Azerbaycan Bank	81 355,6	1,0	1,0
20	AzerSanayeBank	78 433,7	0,9	0,9
21	Royal Bank of Baku	74 800,9	0,9	0,8
22	Turan Bank	71 915,1	0,9	0,7
23	Amrah Bank	61 818,5	0,7	0,6
24	Para Bank	56 482,7	0,7	0,5
25	Bank Avrasiya	49 924,2	0,6	0,4
26	Azer-Turk Bank	37 068,6	0,4	0,2
27	Birlik Bank	35 755,8	0,4	0,2
28	NBC Bank	33 652,2	0,4	0,2
29	Qafqaz İnkishaf Bankı	32 544,4	0,4	0,2
30	Debut Bank	32 458,9	0,4	0,2
31	United Credit Bank	30 825,8	0,4	0,1
32	Atra Bank	29 325,8	0,4	0,1
33	Ganca Bank	27 220,3	0,3	0,1
34	Deka Bank	26 211,4	0,3	0,1
35	Kredo Bank	25 152,7	0,3	0,1
36	Gunay Bank	25 083,8	0,3	0,1
37	Azerbaycan Kredit Bankı	24 935,0	0,3	0,1

38	Melli İran Bank	20 977,2	0,3	0,1
39	Azernəqliyyat Bank	19 769,6	0,2	0,1
40	Azal Bank	18 629,4	0,2	0,1
41	Kovsər Bank	16 389,5	0,2	0,0
42	Avro Bank	14 275,9	0,2	0,0
43	AF Bank	13 130,8	0,2	0,0
44	Atlant Bank	11 347,8	0,1	0,0
45	Pakistan Milli Bankı	11 154,9	0,1	0,0
	Total assets	**8 316 288,5**	**100%**	**1958,3**

The calculation results show that the *HHI* in Azerbaijani Banking industry amounts to 1958,0.

It is also rather interesting that only 9 months ago the system was less concentrated:

№	Bank	Amount of Assets in mln. USD	Market share in %	Squared Market share
1	International Bank of Azerbaijan	2345,3	40,3	1 624
2	Bank Standard	550,9	9,5	90
3	UniBank	318,1	5,5	30
4	Texnika Bank	289,7	5,0	25
5	Kapital Bank	219,2	3,8	14
6	Bank Respublika	214,4	3,7	14
7	Xalg Bank	182,5	3,1	10
8	Azerigazbank	135,3	2,2	5
9	Azerdemiryolbank	127,8	2,2	5
10	Bank of Baku	113,1	1,9	4
11	Microfinance Bank	101,5	1,7	3
12	Nikoil Bank	94,2	1,6	3
13	AtaBank	89,6	1,5	2
14	Yapı Kredi Bank Azerbaijan	86,0	1,5	2
15	Bank of Azerbaijan	80,5	1,4	2
16	Mugan Bank	72,7	1,2	2
17	Rabitabank	68,9	1,2	1
18	Zamin Bank	67,1	1,2	1
19	Azerbaycan Senaye Bankı	56,8	1,0	1
20	Turan Bank	56,1	1,0	1
21	Emrahbank	43,5	0,7	1
22	Azer-Turk Bank	36,6	0,6	0
23	Para Bank	34,3	0,6	0
24	Debut Bank	26,6	0,5	0
25	Royal Bank of Baku	24,7	0,4	0
26	Gence Bank	24,1	0,4	0
27	Gunay Bank	22,2	0,4	0
28	United Credit Bank	21,1	0,4	0
29	Azernaqliyyatbank	20,0	0,3	0
30	Azerbaycan Kredit Bankı	18,2	0,3	0
	Other Banks (15) less than 0,01%	279,0		
	Total	**5820,0**		**1 840**

It should be noted that according to the US Department of Justice's Methodology which is acknowledged as the best international approach the market in which the HHI is in excess of 1800 points is considered to be concentrated.

So based on the ratios and other signs it is possible to conclude that Azerbaijani banking industry is no exception and like other oil exporting countries Azerbaijan has oligopolistic market structure.

It should be also noted that Azerbaijani banking sector characterized by the fact that the state-owned banks have dominant positions and controls up to the half of the market. So, it could be called as a **public oligopoly**.

In fact 2 government banks control around 50% of the market. These banks have priorities in serving government accounts companies and are distinguished by extremely high commission fees. Moreover, they control around 80% of all pension payments throughout the entire country. Another advantage of these banks is that they are considered as the least risky because legally the government is responsible for their liabilities. Two years ago the government declared an intention to privatize these banks, but still no real steps have been taken in this direction.

However it can be assumed that the reluctance of the government to accelerate the privatization of big public banks in oil exporting countries is strategically or politically motivated. It may be concluded that the governments of small oil exporting countries are afraid of possible capture of their financial markets by foreign investors with the possible result that the economy significantly dependent on and can be influenced by transnational corporations.

In this context Karl (1999) has argued that petro-states are like other rantier states drawing their economic power and political authority from their dual capacity to extract rents externally from the global environment and subsequently to distribute these revenues internally. Naturally that the internal disturbance can be implemented by means of the bank industry and for the state it is more convenient to distribute revenues through the one or several banks. To this end many oil exporting countries try to keep one or several banks under direct control. Of course the state provides these banks with certain preferences and with laps of time the banking industry becomes oligopolistic.

Another aspect of banking industry in petro states that petroleum provides high level of rents over a long period of time. This fact may imbue governments with a false sense of security and lead them to lose sight of the need for good and judicious economic management. In this sense

petrodollars “lock-in oil-based development choices” (Karl, 1999, p.36) and create high barriers to reforms.

It also should be noted that currently among petro states only one country – Norway – has a highly developed banking industry. One of the factors separating Norway from others is timing. Norway was already a developed country at the time of the oil discoveries in the 1970. And most important factor that Norway’s financial system was matured and developed, although by no means fully liberalized (Gylfason, 2001). In contrast, development did not take place in most oil exporting countries prior to the discovery of their oil resources.

However it is rather interesting that although Norway is considered as the most successful country in overcoming of the typical challenges for oil exporting countries the country could not avoid the problem of concentration in the banking industry. According to the Nordic Banking Structure Report (2006) the two largest banks in Norway, “DnB NOR” and “Nordea”, have a combined market share in the banking market roughly five times as large as the combined market share of the three largest medium-sized banks.

Branching is another reason which leads to oligopoly in banking industries. Traditionally, branching has been the most important “non price” feature of retail banking competition for private customers and small and medium sized corporations. Banks generally attracts customers by topping rivals` deposit rates, undercutting their loan rates, **or expanding their own branch networks** (Vesala, 1998). Branching is the primary source of oligopolistic banks` market power since providing cheaper access to services in comparison to medium sized banks, while the actual services and products are relatively the same. Thus establishing of wide branch networks requires from banks to bear **huge sunk costs**. It is obvious that only big banks can afford such expenses creating additional barrier between themselves and the rest banks in the industry.

All abovementioned reasons are reflected in Azerbaijani Banking Industry and can be considered as the main sources of oligopolistic market structure.

To be more precise: the local private banks do not have even potential capacity to compete with state owned banks in terms of access to customers (branch network), number of ATMs, access to accounts of big government companies and cheap resources, etc.

Thus, the public oligopoly in addition causes the inefficient accumulation and distribution of financial resources.

It should be noted that in order to avoid or at least to decrease concentration in banking industry one should cancel **the limit** for participation of foreign capital in the local banking systems.

Moreover, it should be stressed that it is widespread, in the majority of oil exporting countries, establishing of so-called "pocket" banks which are established to serve the business of a single person or a corporation. It is clear that in some cases existence of such banks in the industry may impose an unjustified risk on depositors as banks of such a kind can not implement a sound policy on risk diversifications and conduct their business in accordance to the Standards of Corporate Governance. This state of things may instigate the creation of oligopolistic bank industry because potential customers prefer to be served by the bigger and more reliable banks.

The possible way of resolution of the problem is to adopt the relevant legislation which stipulates establishment of a bank only in the form of public corporation.

Other relevant steps can be implemented by Central Banks as the main authorities responsible for the bank industry in almost all oil exporting countries. For example, a Central Bank can issue regulations prohibiting transactions with "related parties". As a result of such regulations, many banks with single "customer-shareholders" will become more vulnerable to transactions with related parties and be forced to look for new customers and market opportunities. Most of these banks eventually will merge with others or be acquired. Thus the measures mentioned above may decrease concentration in banking industry.

3.8 Political Risks

Due to extreme volatility of oil prices it has been considered that businesses operating in the petroleum and natural gas are particularly susceptible to market risks and other commercial risks. However political risks in the energy industry plays an increasingly important role since the world's oil and gas production pattern is directly linked to the geopolitical location of reserves. It is truth that almost all oil reserves are located in the regions of the world characterized by an unstable political environment. Obviously that unstable political environment has its own negative impact on the stability of the banking industry of any oil exporting country.

Analysis of political risk should be focused on how a specific leadership change would affect the country's stability – the unit of measure for political risk. Political stability can be defined by political leaders' capacity to conduct the policies they want even amidst shocks and their ability to avoid generating shocks of their own (Bremmer, 2005). In this context shocks themselves are another important concept in evaluation of political risk.

The first distinction must be made between bank – specific political risk in oil exporting countries and a country specific risk (Vrooman, 2003). The example of bank specific risks can be a risk that a Government will cancel or postpone specific arrangements with banking industry or decide to withdraw all oil revenues accumulated in the bank industry from the country. Banks

specific risks therefore are by nature can be considered as discriminatory. On the contrary country-specific political risks are not directed purely at a certain bank or banking industry in whole. Examples include a government's decisions to forbid currency transfers or limit currency convertibility or even the outbreak of a war in a country.

Another interesting aspect is that many transnational companies have invested in the oil industry of the oil exporting countries through local bank institutions. Thus in case of government's change on a later stage restricts on certain operations or even confiscation or freezing of assets of a company may take place. Clearly, confiscation or freezing of assets of any company which holds its account in the local bank may significantly undermine the liquidity of banking industry, especially in case when Oil Company has a huge debt to the banking industry.

Political risks are considered to be main problem in oil exporting countries that prevent Foreign Direct Investment in non-oil sectors.

Gylfason (2006) has argued that in most cases huge natural resource rents, especially in conjunction with ill-defined property rights, imperfect or missing markets, and lax legal structures, may lead to rent-seeking behavior that diverts resources away from more socially fruitful economic activity. The struggle for resource rents may lead to a concentration of economic and political power in the hands of elites that, once in power, use the rent to placate their political supporters and thus secure their hold on power, with stunted or weakened democracy and slow growth as a result.

Weaknesses mentioned above may stipulate existence of weakness political institutions. This uncertainty, in turns, gives rise to poor allocation of oil revenues, creates significant **problems in property rights on** which those revenues are based (World Bank, 2004). Property rights enforcement is notoriously difficult in the majority of oil exporting countries (World Bank, 2004).

Azerbaijan also has demonstrated the existence of such problems that slow down the development of local banks. The last mission of IMF (2006) warned about the government's loss of momentum in implementing necessary reforms. The mission has identified the main weaknesses related to delay in adopting an effective anti-corruption program, the drafts of the antimonopoly code, the investment law, and the Anti-Money Laundering and transparency (AML) legislation.

Problems with property rights are still a problem in Azerbaijan as well. According to Mr. Jabbarov (interview, 2008) local banks still face big difficulties in appropriation of collaterals in case of lost loans.

According to the modern literature political risk can be managed in two ways:

1.) Actual political risk insurance

2.) De facto insurance

Actual political risk insurance is aimed not at preventing a loss, but rather at assuring a bank that compensation will be received for all or part of the investments made by banks, if loss does occur. It can be obtained through private companies.

De facto political risk insurance is aimed at trying to prevent a loss from occurring in the first place. It is more effective against certain risk such as currency inconvertibility, war and etc.

These two methods are not mutually exclusive. They complement each other and in some cases can be even used in tandem.

4. The Role of Governments

The Government should be explicit about converting the limited and depleting oil resources into long-term and sustainable benefits for society. Together with transferring the oil earnings as current income to the current generation, huge amounts should be invested in order to provide the base for a long term growth. That can be accomplished financially (using oil revenues for investments by means of the local banks), or physically by building the infrastructure (road, power stations) and human capital that will last for decades.

Regularly reassessment of the appropriate policy mix in oil exporting countries is the one of the prudent ways for management of increased oil revenues (Sash, 2007). Oil revenues are highly volatile and the specific mix of appropriate fiscal, monetary and exchange rate policies will have to be changed along with fluctuations in international prices, oil flows and changes in the productivity in the non-oil sectors. The changes in the policy will definitely impact on a banking industry, especially through fluctuations in exchange rates, tax policy and particularly in monetary and credit policy.

However, it should be stressed that almost all researches related to the oil exporting countries underlines that in the majority of cases natural resource abundance may lead governments to lose sight of the need for growth-friendly economic management, including free trade, foreign investment, bureaucratic efficiency, and good institutions. In this context Gylfason (2006) has argued that incentives to create wealth through good policies and institutions may be delayed because of the relatively effortless ability of Governments to extract wealth from the soil (that is oil). Additionally, abundant oil revenues may reduce the willingness of governments to

accumulate human capital, even taking into account that these funds may enable a government to give a high priority to education.

Consequently, oil revenues if not well managed by government may result in erosion of quality of human, social, physical, and foreign capital, and become an obstacle for diversified development of the economy.

Thus without a planned government strategy focused on protection of the local economy and the financial system both of them are doomed to inevitable shocks. The role of government must be analyzed not only from the perspective of protection of banking system alone from economic shocks but also protection of the whole economy and the banking system as a part of it.

To protect the banking system from financial crisis caused by oil-revenues effect a government first of all should focus on providing continuity and stability of prices and exchange rates. According to Arrau and Claessens (1992) government of oil countries can do this by two ways:

1) Transfer risk to international (capital) markets;

2) Self-insure (accumulation of foreign assets).

4.1 Transferring risks abroad

The first, transferring risks to international markets can be achieved through a combination of borrowing and lending in international capital markets and using hedging instruments linked to price of oil. This is usually done because international markets are larger and better able to bear price risk. Experience demonstrates that, the most popular instruments to hedge annual oil revenues form fluctuation are futures, petroleum put options and collars.

At the same time Daniel (2001) argues that futures and options traded on markets will not always be the most suitable and effective tools for hedging in country with less experience and institutional capacity for understanding hedging strategies. Therefore, he suggests that a focus on the over-the-counter market where a tailor-made arrangements may be made directly with a financial intermediate.

Nevertheless, it is common that hedging of oil revenues is usually implemented in industrialized countries such as Canada and Norway and with few examples from GULF region. And its uses are not very popular in emerging economies. **According to Daniel (2001) the main reasons for such unpopularity are confidentiality and unwillingness of producers to reveal market sensitive information and political matters such as reputation of government in case of wrong hedging decision**. On the one hand playing with hedging instruments must comply with the highest transparency requirements. Another important argument in favour of modest use of

hedging instruments is the sustainable trends to increase. Thus in case if prices of oil increase there is high possibility that may result in "missing out" on higher revenue, which may negatively affect reputation of the government. In this context it is appropriate to mention that Mexico is the first oil exporting country that has used financial derivatives for hedging of oil-revenues and in consequence faced the same problems (missing out).

According to Mr. R. Orujev (interview, 2008) the National Bank of Azerbaijan does not plan to hedge government revenues from oil price fluctuations in near future. He substantiates this approach with three arguments: First there is a very low possibility of sharp oil-price fall in near future. Second the government has already protected itself by fixing the price in the State Budget with extremely low oil price of around USD 50 which is more than half less than the real market price. The government has already established The State Oil Fund which also fulfills stabilization functions and has plenty of reserves to regulate and mitigate the processes in case of unfavorable scenario.

4.2 Establishment of Stabilization Fund

Stabilization or Oil funds have became very popular in resent years because of the volatile nature of oil prices. Many commodity exporting countries have established such funds in the last several years or intend to do it. Although, most of them have different structures, names or management style, all of them have one unifying objective: to assist in dealing with the problems emerging as a result of commodity-revenues effect.

Due to volatile nature of oil prices and revenues oil funds accumulate excess revenues in periods of high oil prices and conversely finance the budget deficit of the country during periods when oil prices less are than the one estimated in a state budget.

The existence of such a stabilization fund in a country is also particularly important from the standpoint of soundness of both the banking system as whole and individual banks. Together with helping stabilization of the fiscal policy, oil funds fulfil important monetary functions:

- Prevention of a national economy from excess dollarization (in most cases oil is traded in US dollars);
- Prevention of a national currency from artificial appreciation that usually follows huge oil foreign currency inflows to the country.

Hence, it can be concluded that oil funds play a significant role in the reduction of possible foreign exchange risk in the banking system.

However it should be mentioned that the effectiveness of the Fund as mechanism of stabilization of fiscal policy and protection from the macroeconomic turbulences created by oil revenues can be easily diminished.

Rigobón (2006) defined 2 main reasons which may reduce the effectiveness of funds. He relates the first and the main problem of the funds where, for the best effectiveness there should be constraints implemented as "spending" rules. This is required because in the case of saving funds politicians have the temptation to access and spend resources accumulated in the fund while in case of spending rules they have to comply with previously limited or restricted spending requirements.

Another problem is the mistake usually made by managers in the process of choosing an investment strategy of the fund or how resources of the fund should be invested. For investment Rigobón (2006) suggests choosing only those assets which have returns which are negatively correlated with fiscal shocks that the country may face. This will be the most efficient strategy from the point of stabilization.

But by paradox, analysis shows that most funds usually prefer investing their resources in short-term treasury bills of industrialized countries, such as, the USA. Although in most cases these financial instruments have a very insignificant correlation with the risks of oil exporting countries. Obviously that the reasons for such voluntarily inefficient choices are very low risk associated with these instruments and high liquidity.

5. The Role of Central Banks

Political Independence and Political Support

It is obvious that central banks as the authority responsible for macroeconomic policy and regulation of financial institutions play or should play the key role in establishment of long term stability for the development of banking industry in one or another country. However in the context of oil exporting countries in the majority of cases the main question - are central banks really empowered to do so.

According to the Core Principles for effective banking supervision (2006) banking supervision authorities (in the majority of cases are central banks) must be provided with the highest level of independence both from financial and political decision making points of view. It is also accepted world-wide that central banks are considered to be politically indifferent (apolitical) and are autonomous from the main government in implementation of macroeconomic policy.

The analysis shows that in oil exporting countries central banks are politically independent de jure. But de facto in the most cases the policy of the central banks is more or less influenced and intervened by the central government (Economist, 2007).

In general interventions are usual for emergent economies but in oil exporting countries they become more frequent because of government is getting "blinded" with available huge financial recourses.

Another important aspect of the efficiency of a central bank is whether its opinion is considered and supported by the government. This is very important because even if a central bank is independent very often in oil exporting countries macroeconomic shocks are caused by issues beyond the scope of the responsibilities of a central bank. Decisions of a government to increase salaries or huge government investment on social infrastructure such us roads, bridges, renovation of historical building in oil exporting countries are common. If such budget expenses are not planned in coordination with a central bank they may become a reason for inflation and financial instability.

Consequently, instead of targeting and managing inflation central banks have to struggle with it. In other words, the central banks have to behave re-actively while they should behave pro-actively.

5.1 Regulation

Traditionally it has been considered that in the frame of banking regulation Central Banks have to monitor every single transaction. However banking regulation has changed its inclination from traditional **towards prudential regulation** (Stiglitz et.al 2000). Oil exporting countries are not exception in this context. For example in Azerbaijan over the past decade several changes in the system of prudential regulations have occurred: First, given the increased number and complexity of transactions, there has been greater stress on monitoring bank's risk management system. Thus **risk based supervision** approach is applied currently by the National Bank of Azerbaijan. Secondly, in a wave of financial market liberalization interest rates also have been deregulated and restrictions on the asset choices of bank are not used in current practice as well. Thirdly, and this can be considered as the most important one, greater emphases has been placed on capital requirements, using the Basel Committee standards of Basel I Accord (ratio between risk weighted assets and regulatory capital).

It has been mentioned that concentration is a feature of the banking industry of the oil exporting countries. The concentrated market structure creates the situation in the bank market when several banks become backbone of the whole system in a country. This in turn causes another

problem which is called in the economic literature as “Too big too fail”. The **Too Big to Fail** is the idea that in banking regulation the largest and most powerful banks are "too big to (let) fail", which ultimately means those banks would have less incentive to practice sound business practices, since they would expect to be bailed out in the event of failure. Thus it can be concluded that oligopolistic market structure in the oil exporting countries creates an undesirable **moral hazard** in banking.

For example according to the information acquired from the National Bank of Azerbaijan big banks, which form oligopolistic group, violate prudential requirements set up by the National Bank of Azerbaijan. Non-compliance with the normative limitation **on maximum loan per one customer and violation of capital adequacy ratio are among the most common**.

However it should be stressed that taking into account that periods of oil boom are accompanied with increases in many kinds of risks, (discussed in previous chapters) the central banks (Azerbaijan, Kazakhstan) chose a policy of a more conservative regulatory regime over banks. This usually implies tightening of regulatory norms and increasing minimum capital requirements. For instance during the year 2007 the National Bank of Azerbaijan tightened 7 out of 12 regulatory norms and twice raised the requirements on minimum total regulatory capital of banks (National Bank of Azerbaijan, 2007).

Examples mentioned above demonstrate the weakness of banking supervision. However it should be stressed that granting broad powers to supervisors is not considered as a good sign as well. Barth et al (2004) have argued that powerful supervisors may exert a negative influence on bank performance. Powerful supervisors may use their powers to benefit favoured constituents, attract campaign donations and even extract bribes. Obviously that under these circumstances powerful supervisors will be positively related to corruption and will not improve bank development, performance and stability.

Basel II can be considered as a compromise settlement between supervisory authority and bank industry. The modern developments in the banking industry practically decrease efficiency of Basel I. It is considered that Basel II is more responsive to the new challenges in the banking industry. Moreover the main part of Basel II is based on the process of risk management. Unlike Basel I this new approach (Basel II) gives defined level of autonomy for banks in the context of identification of risk profile.

It seems that for oil exporting countries Basel II has a paramount significance as its main target is the largest and most sophisticated banks.

Conclusions

In the frame of the current work the main symptoms and effects of the Dutch Disease on an economy of oil exporting countries have been studied and discussed. The discussion has covered the impact of oil revenues on the banking industry of the oil exporting countries. It was also revealed that the impact of oil revenues on the economy and banking system may significantly differ depending on several factors such as: institutional structure, legal regime, fiscal policy, transparency and perception of the problems by the policy makers.

Nevertheless, analysis of several economies of oil exporting countries demonstrated that in spite of some significant differences in management style, bank industry in these countries mostly face similar types of risks. Exchange rate risk, inflation, high growth rate, interest rate risk, political risk and liquidity risk are the most charachteristic risks for the banking industry of petrostates.

The analysis of exchange rate risk revealed that in countries where expected oil-revenues are significantly more than expenses of the state budget, the exchange rates may have a predictable trend. This makes exchange rate risk more manageable for banks. Nevertheless, taking into account increased import as a result of the Dutch Disease banks are still significantly exposed to FX risk because of the necessity to finance import operations of borrowers involved in international trade. Therefore, banks should continuously observe the market and current situation with oil production and oil market price in order to accurately determine **the point** when oil production transfer from growth phase to decline phase. **In the course of analysis the strong positive correlation between market price of oil and appreciation of the currency has been disclosed as well.** This is particularly important due to necessity to restructure the balance sheet and adjust foreign exchange policy to changing market macroeconomic conditions.

In the example of Azerbaijan it was shown that private and public bank may react differently to inflation. For instance public banks sometimes may even benefit from inflation in terms of interest rate margins because of oligopolic market share and absorbing most government expenses. As for the private bank they are suffering from the inflation especially due to shrinking interest margin and limited penetration to the market.

In the course of analysis it was found that **concentration** is the main feature of the banking industry of the oil exporting countries. Analysis of HHI in relation to Azerbaijani banking industry, in different periods of time, has revealed that the index demonstrate sustainable growth towards still more concentration.

The rapid growth of the credit portfolio is one of the most dangerous threats for the soundness of the banking system in oil exporting countries. This is mainly because of the hidden nature of the risk which behaves like an "iceberg". The rapid growth of the portfolio conceals increasing problems with the quality of loans and with a lack of capacity and expertise to manage a growing portfolio.

It was demonstrated that interest rate risk of banks in oil-countries is usually associated with involvement of local banks in borrowing abroad and it makes them vulnerable to interest rates not only in local market but also in the international economic arena.

It was revealed that interest rate risk can be impacted by populist government loan schemes which reduce the average rates without economic justification. Such subsidies cause problems related with **moral hazard**.

The analysis revealed some interesting trends in banking systems of oil exporting countries. In most cases banks demonstrated much higher liquidity than was required by prudential norms. This fact stipulates the high sustainability of the banking industry of oil exporting countries toward liquidity shocks.

Taking into account that the management of oil revenues has a macroeconomic impact, the possibility of individual banks to overcome financial threats largely depends on government policy and support. It is very important that the government demonstrates a political will and minimizes financial turbulence by means of providing transparency of expenses, conservative fiscal appetite, and implementation of modern hedging instruments even if the latter sometimes are associated with reputation risks.

Referring to the previous works the main problems associated with management of oil-stabilization funds in the context of soundness of financial system also were defined. These includes tradeoffs between saving and a spending type of management, choice of investment instruments not correlated with oil-revenues and difficulties with the efficient management in case of establishment several similar funds.

It is recommended that governments not only de jure but also de facto have to give central banks authorities independently implement macroeconomic and supervisory policies without government intervention. However it is necessary to avoid the negative impacts of excessive supervisory powers. Application of Basel II is considered as a possible way out to avoid problems related with excessive supervisory powers.

It was also found that in order to protect banking systems from financial crisis caused by oil-revenues effect a government first of all should focus on providing continuity and stability of

prices and exchange rates. Government of oil countries can do this by two ways either transfer risk to international (capital) markets or by self-insure (accumulation of foreign assets).

At the same time it was concluded that the efficiency of Central Banks will mostly depend on the fact if they are a “driver” or being “driven” in management of oil revenues.

On the basis of all mentioned above it can be concluded that banking systems and individual banks in oil-exporting countries are unlikely to be capable on their own to overcome the threats of Dutch Disease and huge oil revenues without government support.

Unfortunately in the majority of cases the authorities and other inhabitants of oil-rich countries become overconfident and therefore tend to underrate or overlook the need for good economic policies. In other words, nations that believe that natural capital is their most important asset may develop a false sense of security and become negligent about economic policies and about banking industry specifically. That is why in oil-rich countries awareness of risk which have been discussed in the frame of current work, as well as a conscious effort and ability to contain them is perhaps the best policy against them.

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(Appendix 1)

Structure of the regulatory capital under Basel I in Azerbaijani Banking System

In order to be in full compliance with the Basel I currently the amount of the bank's capital must be linked with the amount of "risk weighted assets". To this end, all assets are divided into four basic credit risk categories according to the characteristic of counterparty and assigned weights which can be equal to 0%, 20%, 50% and 100%.

In accordance with the requirement of NBA it is mandatory for banks to maintain its capital at the level of no less than 8% of its risk-weighted assets.

The structure of the capital must include the all necessary elements which are prescribed by the Basel Accord (Tier I +Tier II). Moreover the portion of Tier I Capital in the bank's total capital must be not less than 50%.

Structure of the regulatory capital under Basel I in Azerbaijani Banking System

Tier I Capital (core capital) includes:

1. Fully paid-in common stock in circulation (less repurchased common stock)

2. Fully paid-in shares.

3. Non-cumulative perpetual preferred stock.

4. Surplus (i.e., the difference between the market value and nominal value of common or preferred stock, or capital surplus).

5. Undistributed net profit (distributed and undistributed profit from the previous years less loss).

Undistributed net profit includes:

a) profit from the past years (less loss from the past years and current year);

b) capital reserves (funds) - these reserves are formed from the funds created on account of the profit of the past years or profit and must meet the following requirements:

They are formed from other funds created on account of after tax net profit or profit, are indicated in statements, official information and are able to cover the losses associated with given assets. They may be formed only for expenses, but not for reserves. These capital reserves may not be used to pay dividends.

6. Capital of minority stockholders (shareholders) of the bank's subsidiary in accordance with the bank's consolidated statement (balance sheet).

Tier II Capital (additional capital) must not exceed Tier I Capital.

This condition is not designed to restrain or limit Tier II Capital elements. It should be perceived only as a condition requiring the surplus amount not to exceed the level of Tier I Capital when the total capital is calculated.

Tier II Capital includes the following:

1. Profit from the current year;

2. General reserves, i.e., up to 1.25% (after deductions) of risk weighted total assets (including on-balance sheet and off-balance sheet accounts), but not exceeding the general reserve for loan and lease losses. At the same time, this reserve must not exceed Tier I Capital (after deductions).