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„Fixed Income Securities portfolio optimization based on SOFAZ example"

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Abstract

English: This thesis mainly addressed SOFAZ role and function in Azerbaijan economy and content of its portfolio building. The three interviews have been conducted to shed light on the portfolio construction and optimization process.

Deutsch: Diese Masterarbeit in erster Linie angesprochen SOFAZ Rolle und Funktionen in Aserbaidschan Wirtschaft und Inhalt seines Portfolios Gebäude. Die drei Interviews wurden auf der Portfoliokonstruktion und Optimierungsprozess zu beleuchten durchgeführt .

Key Words

- **SOFAZ –** State Oil Fund of Azerbaijan Republic
- **NWF –** Norway Wealth Fund, Norway's Government Pension Fund Global
- **Manat –** The local currency of Azerbaijan Republic

Content

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Introduction

Azerbaijan is one of the fastest growing economies in terms of GDP among the post-soviet countries. The economic influence of the country in its region rises year by year, which mainly rely on country`s returns from hydrocarbon resources (mainly oil and gas resources). By building oil and gas pipelines, exporting its carbo-hydrogen resources to the Europe Azerbaijan has become very significant partner of European region as an alternative source of energy security of European continent.

The role of the State Oil Fund of Azerbaijan Republic (SOFAZ), its role in the development of country`s economy, economic transition process from centrally planned economy to market economy has not been yet particularly researched. The flow of continuous reforms in the economy is implemented by aiming at more transparency and accountability which highly likely will stabilize the macroeconomic condition of the economy and carry further the economic prosperity. After completing preliminary research on this topic, I found out that, State Oil Fund of Azerbaijan (SOFAZ) will be very good example for showing how the biggest asset country – oil and gas play such a crucial role in economic development of the country. The question of which of its good practices can be used in other areas of Azerbaijan's economy and other public organizations of the country interested me. But the main scope of this research is to pursue finding what is main strategies and practices in the asset management from hydrocarbon resources, particular interest was given to fixed income portfolio.

The available content in English on SOFAZ is not quite abundant. It is mainly consists of online resources such as various reports issued by SOFAZ itself, books, articles offers limited literature resources to shed light on more on this topic. But knowing the local language and having access to the employees of SOFAZ I was able to get more detailed and comprehensive information about the asset management and strategies in portfolio optimization.

The role of SOFAZ in the economy of Azerbaijan Republic has been only researched in superficial level in the majority of research that I have come across. Unlike other research, it has been tried to cover primary aspects of fixed income portfolio selection by using the available content in Azerbaijan language as well as conducting interviews with some of the employees in SOFAZ. The scope of the thesis covers various issues such as the role of SOFAZ in maintaining macroeconomic

stability; strategic asset allocation, fixed income portfolio, SOFAZ risk management strategy and how it is implemented to be in compliance with its strategic objectives etc.

My nationality, being Azerbaijani directed me to choose fixed income portfolio selection in SOFAZ as my research topic. This topic particularly interested me, because I experienced the role of SOFAZ in Azerbaijan economy personally, encountered its advantageous and disadvantageous, drawbacks and sharp changes myself. Therefore, I am familiar with the topic before I chose the topic. I had a chance to reveal some aspects of portfolio optimization through this research which could be neglected by foreign researchers. Apart from that being able to my internship in Investment and Risk Management department between July –August 2015 in State Oil Fund of Azerbaijan gave me unique chance to deepen my knowledge about the State Oil Fund. I built a unique connection with the co-workers of SOFAZ which helped me a lot in conducting my interviews. Also knowing the local language enabled me to broaden the research scope and add specific data and figures to this research, which is only available in Azerbaijan language.

My hypothesis in this research is that SOFAZ prudent investment policy will continue in the near future. This is not the scope of this thesis to argue if it is the best strategy in such uncertain financial environment, but since its foundation, the tendency of mitigation of prudence can be observed. The share of equity, gold, and real estate increased in recent years. But still, the highest share of total asset portfolio of SOFAZ consists of fixed income securities. This phenomenon can be driven from the essence of State Oil Fund. Firstly, the State Oil Fund was created to achieve macroeconomic stability, secondly, it was founded to ensure equal distribution of wealth between current and future generations. These two main objectives were and still is deceive in the majority of strategic decisions of SOFAZ.

It has been chosen two research questions based on the hypotheses, given above. First, what is the general role of SOFAZ in the macro economy of Azerbaijan? Second, what is the role of risk management/investment department in the management of fixed income portfolio?

It has been added several connected issues such the role of recent sharp drops in crude oil prices, its reasons and consequences for SOFAZ and more broadly for the country. Secondly, the possible and current outcome of Dutch Diseases and SOFAZ possible reaction to avoid this syndrome.

Various resources have been used in this research. The publications of Azerbaijan Statistical Committee, Annual report of the State Oil Fund of Azerbaijan for 2014 and 2015 which are most

recent comprehensive reports of SOFAZ, various books, which I translated relevant paragraphs from Azerbaijan to English language, OECD report, figures, tables about the certain field of economy etc. It was conducted three interviews with experts from SOFAZ to generate empirical data and added to this research.

Finally, I would like to thank the valuable persons, who contributed this thesis, including my mentor Professor Jörg Finsinger, my interviewees, and my family. I could not be able to finish this topic without the help and support of them.

Overview of thesis

After gaining its independence from former Soviet Union Azerbaijan choose the transition from planned command economy to market economy. The main driver of economic development was certainly extraction and export of natural resources - oil and gas in the first years of country`s independence. By building, its economy on oil-based strategy, Azerbaijan was one of the fastest growing economies among the post-soviet countries till 2014. The economic influence of the country rose year by year in its region, based on returns from hydrocarbon resources. Consequently, Azerbaijan became a very significant partner in Europe as an alternative source of energy security of European continent. The State Oil Fund of Azerbaijan plays very important role in the realisation of successful management of natural resource, but this relative stable development tendency was broken after the unexpected fall in the price of crude oil.

After the collapse of the Union of Soviet Socialist Republics, the Republic of Azerbaijan chooses the path of the market economy like other fifteen republics. The economy of Azerbaijan designed to function based on oil production and export since that time. One of the most significant events happened on September 20, 1994 the contract for joint production of oil reserves on the Caspian Share of Azerbaijan, particularly “Azeri”, “Chirag”, “Guneshli” fields was signed among Azerbaijan and 11 World knew oil companies such as Exxon, Chevron, Statoil, Lukoil (Azerbaijan.az, oil strategy). This date was a milestone in the implementation of oil strategy, which

also lead to the foundation of the State Oil Fund of Azerbaijan (SOFAZ) in following years. After the ceasefire agreement between Azerbaijan and Armenia in the war front in May 1994, precisely on 20th September 1994 the signature of the so-called “The Contract Of Century" signed, which enabled the country to renew its oil industry with new facilities, attracting investment intensive extraction and transition facilities. The trans-national companies were attracted to the county, over the exploitation of oil deposits in Azerbaijan`s share of Caspian Sea.

As it mentioned, this contract was the milestone for the economy of the country. The contract of the century was signed with the 11 biggest oil companies, represented by eight countries in final agreement. These countries were Azerbaijan, USA, Great Britain, Russia, Turkey, Japan, Norway and Saudi Arabia. The agreement comprises the operation of the "Azeri-Chirag-Guneshli" oil deposits for 30 years. Azerbaijan side possesses the 80% of the net profit and investors take 20% according to the contract (Central Azeri Crude Oil Export Starts, 2005). The significance of this document was that the country got intensive and continuous investment by foreign companies and takes advantage of its natural resources for its own benefit for the first time. Previously oil industry was designed to work for the demand of soviet industry and the return was controlled by Moscow. This contract not only just strengthened the financial position of Azerbaijan and also consolidated the independence of the country.

During this period, the share of private sector in the economy increased from 29% to 69%. The foreign investors put 3.4-billion-dollar investment in the first few years according to the contract of the century. The total sum of the foreign direct investment in total was 15.9 billion dollars during 1994-2000 years. The distribution of the investment was directed 22.8% finance-credit, 56.3% oil sector, 20.9 other sectors (Akif Musayev, 2001, p.12). Such intensive direct investments bring about revival to the economy and give the competitive advantage to Azerbaijan comparing other USSR member countries. The increase in GDP was 10% in 1998 and 7.2 % in the year of 1999. This increase doubled the GDP size comparing 1990 with 2000 year. The strict monetary policy prevented high inflation rate. The inflation rate was just 1.8 % in 2000 where it was approximately 1700% in 1994. Azerbaijan builds economic relations with 122 countries by the end of 2000. The volume of trade was 2.9 billion dollars. It was 2.2 times more comparing with 1993 (Asaf Nadirov - Ş. Muradov, 2003). Main trade transactions during this period based undoubtedly on the oil sector.

The country has started to collect its first gains from oil export from 1997. Subsequently, the issue of effective management of accumulated oil revenues appeared. Otherwise, the appearance of the undesirable effect such as 2-3 digits' inflation rate, Dutch Syndrome could bring considerable hazard to the Azerbaijan`s economy. For this purpose, to avoid the negative effect of high volume uncontrollable cash flow and effective management of financial asset for implementation of socio-economic projects and increasing the strategic non-oil sectors in the economy, the State Oil Fund of Azerbaijan was founded in 1999. Since its creation, 29 December1999, State Oil Fund played a strategic role in the economy of Azerbaijan. The fund serves efficient management of received revenue from oil and gas export (oil fund.az, about) and intertemporal transfer of wealth between generations. Currently, State Oil Fund has internationally recognized the organization for its asset management and transparency features.

After completing preliminary research on this topic, I found out that, the available content in the English language on the economic asset management, particularly, portfolio allocation and the management of State Oil Fund has been covered only by separate fragments in various sources. Unlike, other researchers or report, it has been tried to cover key aspects of fixed income portfolio. I had the privilege to meet and get interview current and former workers of the State Oil Fund who gives invaluable insights about the general portfolio management strategies in terms of the choice of investment policy as well as the risk management policy.

My nationality, being Azerbaijani directed me to choose portfolio optimisation of SOFAZ as my research topic. This topic particularly interested me, because I experienced transition process of Azerbaijan`s economy from centrally planned economy to market economy personally. I personally witnessed the trend of economic growth due to return from oil export of the country and finally I had a chance to do my internship in the State Oil Fund of Azerbaijan at Risk Management and Investment departments. Therefore, I can confidently say that I am closely connected with the topic. I had a chance to reveal some aspects of transition process through this research which could be neglected by foreign researchers. Also knowing the local language enabled me to broaden the research scope and add specific data and figures to this research which is only available in Azerbaijan language.

SOFAZ at glance

We should take into consideration of the main purpose objectives of SOFAZ before looking to the portfolio management and the fixed income portfolio selection. It will be later explained which reasons and objectives are behind of the optimization strategy. The objective of SOFAZ is pursuing to focus on transforming the hydrocarbon reserves of Azerbaijan into a strong financial asset, which will enhance the economy of the country as well as lead to the evolution of economy from planned economy to market economy. Although, the process of transition is generally completed, but the slight fragment of command economy remains. This tendency particularly observable in the management or governance system of the country.

It is not arguable that the assets from hydrocarbon reserves should not entirely spend on the current demand of economy or implementation of for prestige construction projects. Instead, it should be spent on the intertemporal transfer of funds among current and future generations, which will be discussed in the further pages.

The intertemporal transfers of the funds do not only lead to keeping return from the sale of hydrocarbon asset in form of cash in the bank accounts or keeping in form of different kind of liquid securities. It is also important to build strategically important substructure. This strategy will allow the national economy to boost and grow simultaneously. Basically, it means not to eat all eggs today, let some eggs bring a chicken for future consumption.

The State Oil Fund implements social and educational projects also financing the strategically important project for the Azerbaijan Republic. These strategically important projects are those, which supposedly bring enormous future benefits and will pay off their costs in the future. Such as social support of internally displaced people from Nagorno-Karabakh war region, financing building Baku-Tbilisi-Kars railway, financing Building "Southern Gas Corridor" 242 mln Azerbaijan Manat (SOFAZ 1st quarter report, oil fund.az). One of the remarkable projects was the implementation of scholarship program of Azerbaijani student studying in prestigious universities in the World during 2007-2015. I, myself was the nominee of this project and got a scholarship for studying at the University of Vienna.

Unlike other sovereign funds, like Norway sovereign fund, the sole objective of SOFAZ is not only profit generations. The fund has been founded and managed based on strict rule and guidelines.

It will be mentioned the objectives of SOFAZ briefly:

1. Ensuring financial stability by application of disciplined financial tools and supporting the formation of the annual government budget.
2. Decreasing dependence on natural resources by developing and implementation infrastructure projects.
3. Collecting and preserving wealth from hydrocarbon resources for future generations. The Oil Fund supposed to attain intergenerational equality of the population by this. This philosophy lays in the essence of SOFAZ, firstly achieving intergenerational equality from country`s hydrocarbon reserves and preserve economic stability for future generations
4. Transparency – achieving highest level transparency and accountability is one of the main objects of SOFAZ. The issue of transparency is highlighted particularly for partners, employees, counterparties, and all stakeholders. It is carried out external audit regularly to achieve fund`s transparency at the highest level and to be accessible for the majority of the population. The citizens of the country have every possible right and access to check the current results of the fund from yearly and quarterly issued reports, and get more comprehensive information from the annual reports. The quarterly issued reports, annual expenditure and revenue reports, press realizes about strategic position of SOFAZ, its expenditures and revenues both in Azerbaijan and English language allow the majority of the stakeholders to access information about the financial position of the SOFAZ. Apart from that, on the eve of each considerable event or change, a special edition of press releases are issued to inform shareholders in relevant and timely manner.

These 3 main objectives are defined and elaborated by “Investment guidelines “and “Investment policy” which confirmed and supervised by the President of Azerbaijan Republic and his supervisory board. All decisions and strategies on investment and risk management made by the State Oil Fund must comply with this rules and regulations. The aim of the fund as its similar funds need to maximize risk-adjusted return. This means basically aiming return on investment must be relevant to the made risk. It must be clearly defined how much risk is involved in producing desired profit. Oil funds main portfolios should be designed by taking into consideration of this concept. The investment decisions regarding different options are made by considering the same risk

measures, such as Sharpe Ratio in order to be able to correctly evaluate the investment decisions. The term of risk management will be explained in further pages.

The issue of the risk appetite of the SOFAZ plays an utmost important role in the formulation of the portfolio. The majority of stakeholders which are simply the population of Azerbaijan Republic is not certainly very familiar with the sophisticated financial issues, strategic asset allocation etc. They cannot read financial statements or cash flow reports competently. Their only consideration can be safeguarding existing assets. But in real life, the management of this asset is not simple and demands sophisticated methods and strategies. For example, if we consider a second quarter 2015 results: The Norway Wealth Fund made $8.8 billion loss (0.9% of total assets). While during this period, State Oil Fund of Azerbaijan - $157 million profit (0.45% of total assets). Financially uneducated, illiterate observer, with short, limited time horizon may interpret that NWF is in trouble, or mismanaged during this time horizon. But it is not in the compliance with the real world. What appear just, at first sight, does not necessarily reflects the truth. Can it be claimed that the NWF is a terrible fund during this period? Are they losing future generation`s money? Is this the end of Norway`s economy? The obvious answer is NO. This only about the strategic asset allocation of 2 different sovereign funds. The NWF has bigger risk appetite, which supposedly will bring a higher return in the longer time horizon. On the other hand, SOFAZ started to be very risk averse investment policy in the beginning, but the observation shows that this tendency is about to be interrupted. AS NWF, SOFAZ increases riskier asset class in its portfolio such as equity, and real estate.

This above-mentioned case of NWF may happen any funds with a 60% exposure to equity. Which is abundant with high return in a boom period, and undergo fluctuation in crises period. This is part of the everyday routine life of any investor. This is normal. It can be also expected that they end the year with a positive gain.

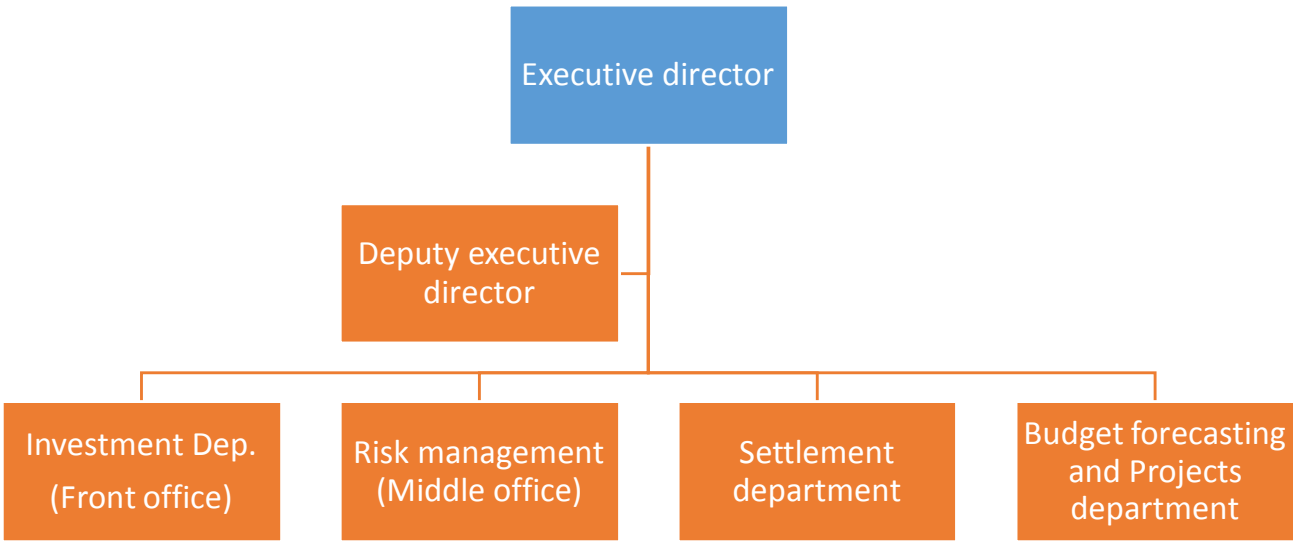
The investor always loses some and make some return within the limits of the society's risk appetite. What is most important at the end of the certain period is if the profit of Sovereign Profit Fund is higher than its losses. The major part of society is uneducated and/or unwilling to understand the business cycle and how markets work. This leads to many uneducated, unprofessional, unconstructive, populistic criticisms which don`t carry any informational weight and are detrimental to civil discourse.

Management of SOFAZ

The underlying expenditures excluding operating expenditures including social and educational projects, transfers to the government budget must be defined in the budget of Azerbaijan Republic and approved by the Parliament of Azerbaijan Republic. The supervisory board plays a crucial role in the strategic management of State Oil Fund. The board supervises the yearly budget before it approved the draft version. General evaluation of the performance of the Fund by considering yearly financial reports and financial statements are made by the supervisory fund. The representation of public organizations is ensured during this whole process.

The main job of the supervisory board is to ensure the strategic wellbeing of the Oil Fund. Apart from that executive director carry out the daily activities and ensure the investment policy of state oil fund is in compliance with the prior determined investment policy. The right of appointment of the executive director of the State Oil Fund belongs to the President of the Azerbaijan Republic. The director has the right to confirm recruitment the relevant skilled employees to the Fund and ensure the operational excellence of the fund.

Organizational structure of SOFAZ is represented in the below chart:



The investment department is in charge formulation and implementation of the investment strategy, determination of asset class distribution of the portfolio such as fixed income, money market, equity, real estate and gold. The investment department together with risk management department plays an utmost important role. As it can be assumed from its name risk management department carries out the task of investment assessment. As we mentioned above all investment decisions in SOFAZ are made by considering Risk Adjusted Return indicator. The strategic role of risk management department lays also in decision strategic asset allocation, which basically refer to the decision on how much from each security, bond (government or corporate), gold, real estate will be invested. By making this decision the risk management department serves to the accomplishment its strategic objectives such as intertemporal transfer of fund between current and future generations of Azerbaijan Republic. Additionally, selection of benchmarks for investment such as LIBOR benchmark for fixed income security investment is another responsibility of risk management department. The risk management department has basically two main divisions:

1. Risk and Performance measurement
2. External asset management

The other departments such as settlement department and budget forecasting and projects departments play a supportive role for investment and risk management department. For example, budget prognoses are the issue of budget forecasting department, as well as macroeconomic modelling, making economic research for the foundation of investment decisions is also the task of budget forecasting department.

The role of SOFAZ in national economy

After the flow of oil and gas returns, dollars brought about threats of Dutch disease. The demand for implementation of economic differentiation and developing the non-oil sector in the country. Several measures have already been taken to prevent undesirable consequences of Dutch disease and developing the non-oil sector in the country. It will be given more focus on the role of oil fund in the development of the non-oil sector in order to shed more light on the role of SOFAZ in macroeconomic diversification.

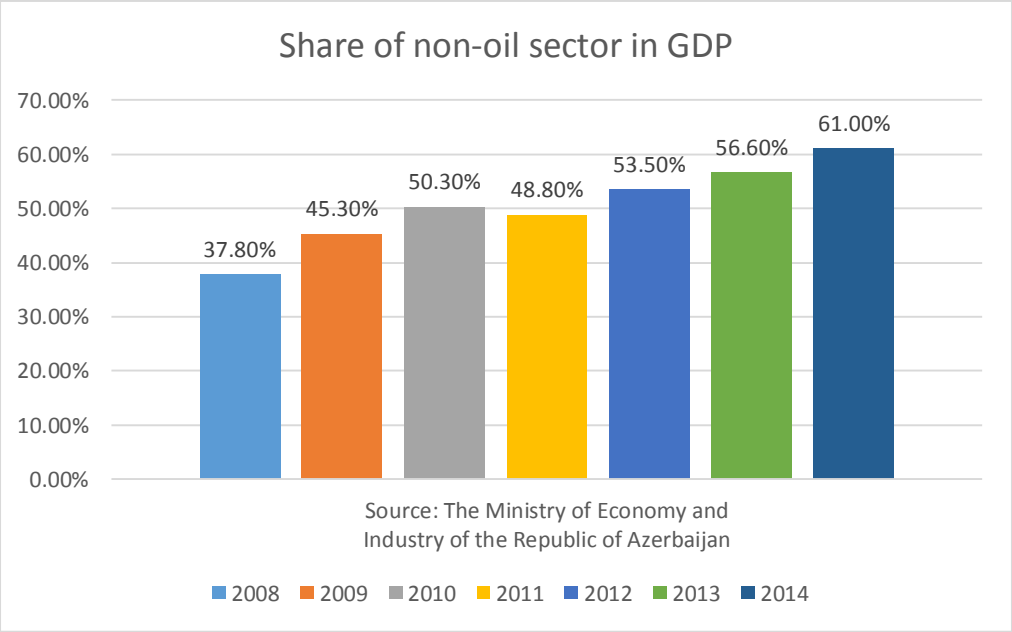


Figure 1: Trend of non-oil sector development.

The State Oil Fund of Azerbaijan Republic plays a key role in macroeconomic stability, which was created to control returns from oil and use it in the diversification of the economy.

Since Azerbaijan restored its independence, foreign direct investment primarily was put on the hydrocarbon and petrochemical industry. It is obvious that Foreign Direct Investment is inclined to be directed to fields where market growth opportunities or cheap production factors, such as labour, raw material or technology exists. On the other hand, a non-oil sector in Azerbaijan does not possess such advantageous particularly in the beginning of independence during the 1991-1995

period. Therefore, investments were directed toward non-oil sector particularly by Azerbaijan government at the expense of oil and gas export returns.

The revenues coming from oil sector tend to increase year by year particularly starting from 2006 when Baku Tbilisi Ceyhan pipeline was finished. There was a necessity to create a single body to collect and direct oil export revenues towards appropriate fields in order to diversify the economy by expanding the non-oil sector.

As it mentioned above, for this purpose, the third president of Azerbaijan Republic Haydar Aliyev signed the resolution on creating State Oil Fund of Azerbaijan (SOFAZ) to control increasing oil revenues and directing them in developing the non-hydrocarbon sector of economyon29th of December 1999. The main objective in the creation of SOFAZ was to ensure inter-generational equality of benefit with regard to country`s oil resources. Starting from 2000 the revenues from oil-gas extraction, transportation and sale in the Azerbaijan's share of the Caspian Sea are accumulated in this main platform in Azerbaijan. The State Oil Fund of Azerbaijan has been created with cooperation and in accordance with the recommendation of IMF experts. Particularly, it has been learned advanced experiences of Norway Oil Fund and Venezuela Macroeconomic Stability Fund in foundation process of SOFAZ. The experience of Norway Oil Fund was significant for learning long-standing stability and collection; the experience of Venezuela was important to ensure macroeconomic balance and budget stability against fluctuating oil prices and directing oil revenues to the non-oil sector continuously.

According to the IMF reports, it has been collected 46.5 billion of dollars to the SOFAZ by the end of 2010 and it has already reached to 100 billion of dollars by 2015. The revenues of SOFAZ comes from Azerbaijan`s shares of oil deposits, transit fees, acreage fees, transit fees, as well as from portfolio management which is kept in various asset clusters. Additionally, if the oil prices would not fall dawn extremely and remain around 40-45 dollars, then the returns are expected to be equal to 180-200 billion of dollars until the end of 2025 according to the same report. By the way, it is worth to state that oil prices are hesitating around 80-90 dollars currently. Azerbaijan`s brand oil "Azeri light" is sold around 114.4 dollars at present (January 2013). Considering these current prices oil return from the export will be around 300-350 billion of dollars (Osman Nuri Aras, Elçin Süleymanov, 2010).

One of the most important roles of State Oil Fund is to control and minimize risks of huge foreign currency inflow to the country. Let us assume that State Oil Fund does not control foreign currency

flow and thus it gets directly turnover, then obviously the local currency Azerbaijan Manat (AZN) would inevitably appreciate against foreign currencies. Bearing in mind that Azerbaijan domestic production has not yet reached to its desirable level, up to the internationally accepted standards, high rate of domestic currency would more decrease the competitiveness of Azerbaijan`s goods in foreign markets. Eventually, foreign currency inflow would not only increase the dependence of Azerbaijan economy to hydrocarbon industry but also lessen interest and concentration to local production. Taking into account these points, the creation of SOFAZ even before the accumulation of high oil returns can be considered proper step.

But there is also some issue which must be taken into consideration, suspicions about the management policy of SOFAZ have been mentioned several times by the independent experts in media. The controversial point here is the challenge of shedding light on the reasons why SOFAZ is performing increasing transfer to the current government budget year by year. It is disputable, whether such operations are effective for building a sustainable economy in the future or creating hindrance against the development of the non-hydrocarbon sector and bring about wealth disparity between generations.

The volume of transfers to the government budget and decreasing amount of accumulated revenues breeds queries about the essence of the Fund. For example, transfer to the annual budget from SOFAZ is intended to be equal to 11.350 billion of dollars or 59.3 % of the entire budget in 2013 (Gubad Ibadoglu, 2012). Additionally, the expert reports state that 57% of accumulated revenues have already been spent. These statistics overtly show the current dependency of the Azerbaijan economy to the hydrocarbon export revenues, where the tendency does not decrease instead rising year by year.

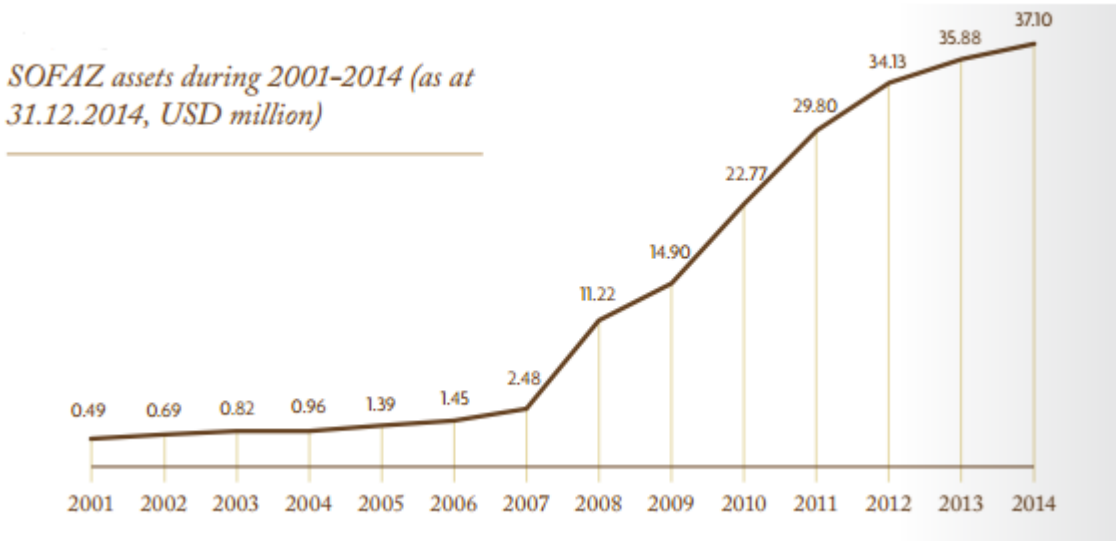


Figure 2. Change in SOFAZ assets 2001-2014

Mr. Ibadoglu states that the economy without transfers from SOFAZ cannot even cover current spending, such as social payments, keeping government agencies, etc. His study on Azerbaijan budget shows that government`s revenues from the non-oil sector which is equal to 5.2 billion AZN

can only compensate 52% of current expenditures. Such tendency seems to be quite hazardous for maintaining accomplishments of the transition process in Azerbaijan. In the case of unexpected oil export disruption, or in event of oil price decline which we are experiencing now may bring about serious

setbacks, consequences in supplement of government budget and government operations. Such occasion appeared in the first quarter of 2009 due to global economic crisis, when oil prices fall dawn unexpectedly.

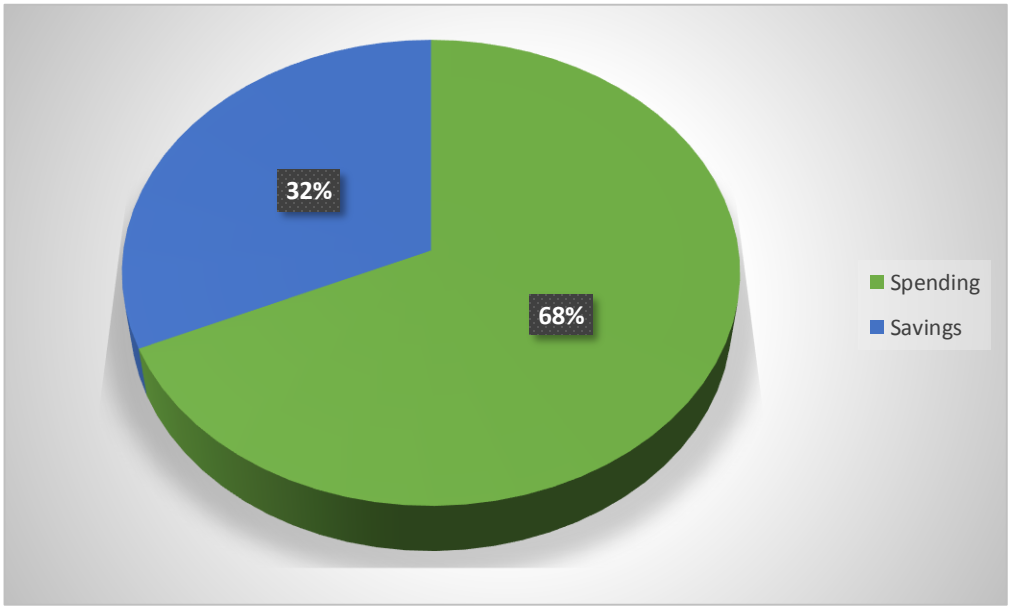


Figure 3. SOFAZ Reserve level 2001-2014

Another significant point here is that oil revenues were intended to be saved for next generations. In total 68.3% which corresponds 80.1 Billion dollars has already been spent, only 31.7% which corresponds 37.1 Billion dollars are kept in the fund under different asset clusters. Thus, it appears a question about the issue of ensuring inter-generational equality of benefits. The expenditures must be well reasoned before performing such transfers to the budget. For example, if the transfer operations to government budget will be compared with Norway Oil Fund, it would come out that, it is allowed only to perform only 4% of transfers to cover budget expenses in Norway. The government has no authority to increase spending. Relying on transfers from SOFAZ assets in formulation process of country's budget may decrease interest in the development of the non-oil sector. Such attitude is one of the main drawbacks of Dutch disease.

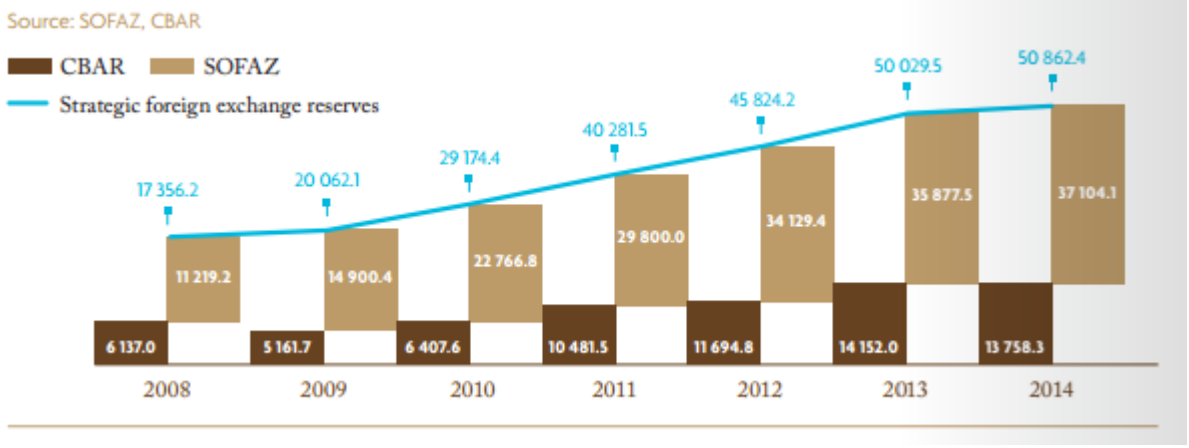


Figure 4. Strategic foreign exchange reserves of Central Bank of Azerbaijan and SOFAZ

In short, the resources of SOFAZ must be used intelligently. If the resources of the fund will be used in accordance with the demand of solidification, then the fund would be very handy tool for the Azerbaijan government in completing long-standing economic transition and open new era in its economy.

It is obvious that the investment policy needs to be prudent, and the majority of the oil revenues should not go to the annual state budget. Particularly taking between 2008-2015 the tendency annual budget formulation based on SOFAZ transfers ranges between 35.3-50.7% which is not a promising sign for Azerbaijan Economy. This keeps a continuous dependency on revenues directly coming from crude oil. The process of utilizing limited oil export returns in building sustainable, productive economy by means of diversification of the economy is a very significant issue in the economic transition process. Otherwise, oil fund should become an obstacle, a barrier in building a sustainable economy which brings about inertia and stagnation in the medium and long term to the economy.

We must also consider Fund expenditures if we want to understand the essence of its portfolio. The majority of its expenditures for the year 2014 consists of Transfer to state budget which comprises of 9.33 Billion dollars. Then comes social support of refugees and internally displaced people, construction of "Star" oil refinery, construction of Baku-Tbilisi- Kars railway station etc. Apart from direct transfers to the state budget, the other big expenditures are in compliance with its strategic objectives such social support, funding strategic important projects. The state oil Fund are financing "State Program on Education of Azerbaijani Youth Abroad in the years 2007-2015" with the purpose of amplifying human capital, 33.5 million dollars were spent on this project just

in 2014. This enabled Azerbaijani student to study in the prestigious universities in Great Britain, Turkey, Germany, Canada etc.

The current returns of SOFAZ and world oil market

The proceeds of SOFAZ based on various sources. This includes Azerbaijan`s share in hydrocarbon reserves, oil transit fees paid by other shareholders, bonus payments, acreage fees. Almost 97% of out of all generated profit was created by crude oil selling. This amount corresponds 15.1 billion dollars in 2014. The main part of generated profit come from extracted oil and Gas from Azeri-Chirag-Guneshli deposits which are situated in the shelf zone of the Caspian Sea belonging Azerbaijan. The management of Fund`s underlying assets plays also very important role in the structure of oil fund revenues. The returns from asset management correspond to nearly 500 million dollars, more princely 494 million dollars. This figures for the country nearly 10 million population seems to be quite satisfactory. On the other hand, strong dependence on the unstable crude oil prices brings about the considerable risk to the economy, budget formulation of the country.

High crude oil prices during the period of 2009-2014 ended. The crude oil prices varied around 115-125 USD during this period. The majority of the crude oil exporting countries enjoyed this period with high return without building strong non-oil based economy. Since the middle of 2014, oil prices start falling, which currently priced around 50 dollars. This means 2.4 times or 70% fall in the returns of crude oil exporting countries. Although the oil prices tend to recover since 2014 several times. But still, it is far-fetched from over 100 dollars/barrel.

Since the start of sharp oil price fall various research has been carried out to shed light on the reasons for this phenomena. The great plunge in oil prices is justified for various reasons.

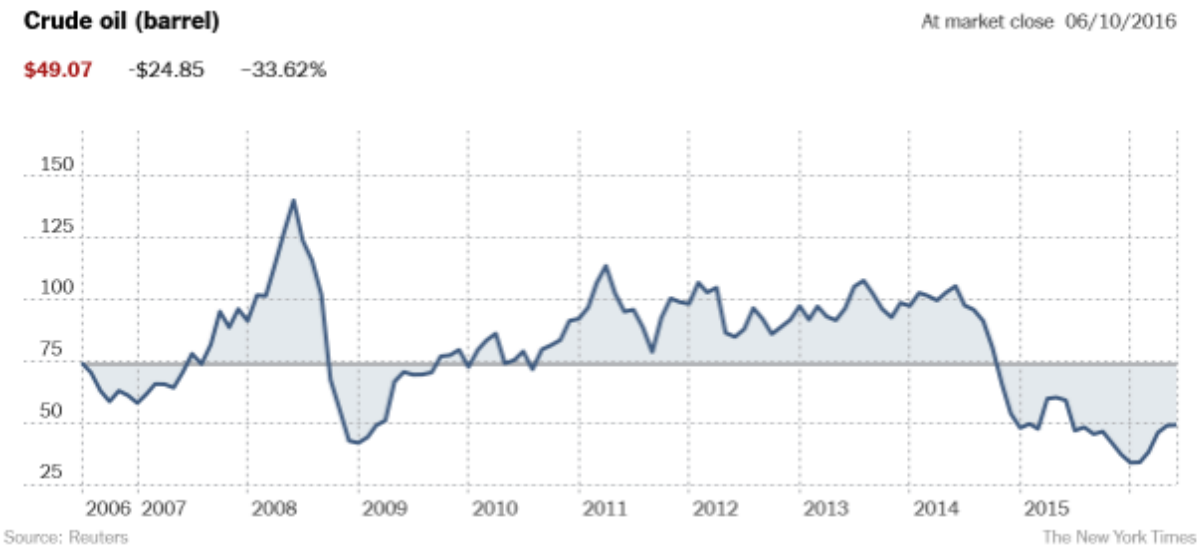


Figure 5. Trend of Oil Prices over 10 years

Almost all pricing issues more or less connected with demand and supply phenomena. The competition over finding crude oil demand became fiercer after the USA almost double its oil production. This brings about huge competition for Saudi, Nigerian crude oil. They forced to enter Asia market where strong supply in comparisons to demand exists. Additionally, USA oil export, Canada and Iraq's increasing crude oil output increase the tendency of low oil prices. After the USA and other western countries lifted sanctions prevailed over decades for Iran. The oil prices for the short and middle term in the best case scenario will remain around 50 dollars after Iran keep pumping oil prices to the market. (The New York Times, Clifford Krauss, Oil Prices Explained: Signs of a Modest Revival). The oil prices are determined in international trading markets. The existing availability of crude oil demand and supply, level of demand, foreseen supply and demands volumes and political issues are determinant of oil prices.

The crude oil markets, evolution of crude oil prices

Evolution of the Price of Crude oil can be divided into 3 main periods.

- The first period pre-1973 Market structure, this period is associated with price stability, seven sisters, "official selling prices" in international markets and formation of OPEC (Organization of Petrol Exporting Countries)
- The second period continues between 1973-1981. During this period OPEC shows its muscles, more control over the disposition of oil assets, oil supply and price shocks in 1973 and 1978-1979. The crude oil prices reached $40/barrel for the first time in the history. This rocketing prices had very serious consequences in the automobile industry. The cars basically got smaller, more fuel efficient.
- The third Period after 1981-till our current time. Commoditization – NYMEX crude futures contracts started trading from 1983, new suppliers entered the markets also new supplies, spot trading, more price volatility e.g. crude oil prices WTI reached $140/barrel in the middle of 2008, OPEC still act to control price achieve a balance between supply and demand.

In wholesale oil markets, crude oil is traded to balancing supply and optimization, for opportunistic trading such as arbitrage trade, storage plays, for risk management hedging used. The oil trading has different motives:

- System trading: asset or supply trading to balance surplus (long) or deficit (short) needs of upstream, refining and marketing.
- Opportunistic trading: finding ways to make money, possibly without taking lots of risks
- Risk management: using trading to fix costs and to protect profit margins.
- Entrepreneurial or speculative: taking positions in the market with the intention of exploiting price movements.

The wholesale oil markets divided into 2 categories. The physical markets (term contract market, spot market, and forward market), financial markets (exchange-traded futures, over-the-counter derivatives). For the sake of simplicity not all market will be explained, because it will be out of the scope of this research. This background is given to shed light on why SOFAZ need to position itself with the more diversified portfolio. Because basically, the fund is the part of Term contract market, which refers to multiple cargos or pipeline supplies delivered over a period of months or years. A refiner such as SOFAZ as a rule use term contracts to secure most of his or her supply, with spot cargos used at the margin, bought to produce products in the right quality and quantity.

As it is mention, the contacts are made in advance, but the prices are adapted to the current crude oil prices. This creates uncertainty over expected return from the crude oil export. As the contracts are made in advance, so the supply amount are already set, there is no room for speculation, waiting for the period when the oil prices are higher or expected. The supply must be continued; the crude oil must flow through pipelines.

The low trend of oil prices can be explained with the reasons that be mentioned as follow:

a) Weak economic activities in the world market sharply reduced the demand for the crude oil.
b) Growing efficient methods in oil usage keep demanding the same even sometimes low than before
c) The increased role of alternative energy resources such as biofuels, the wind, solar energy, new methods of their exploration keeps oil demand low.
d) New methods in oil extraction made some oil deposits available for extracting which was previously considered impossible to process. For example, Canada started to extract oil in Alberta`s oil sand. This deposit was previously regarded unavailable before.

In physical markets, crude oil exporters use several benchmarks. This market works mostly private and confidential deals. The prices can be reported open voluntarily request, published by price reporting agencies such as Platts or Argus and so on. For key crudes exists Brent, WTI, Dubai; For key products markets NYH, ARA, Singapore. WTI – West Texas Intermediate is a light, sweet US crude oil, NYH –New Your harbour – a major US refined product trading location; ARA – Amsterdam, Rotterdam, Antwerp is major European oil trading spot. The crude oil of Azerbaijan is traded negotiated AZERI Light benchmark some premium or discount to published price. The final price is agreed upon future date for example when the cargo loads.

So what we heard about oil prices that are broadcasted on Bloomberg TV for example, is usually either the price of Brent crude oil futures traded on the Intercontinental Exchange (ICE) in London or the price of West Texas Intermediate (WTI) crude oil futures on the New York Exchange (NYMEX) in the New York.

As we mentioned above oil prices generally derived from:

- Supply and demand (economics)
- Anticipated risk of supply disruption (geopolitics)

- Cargo values (quality of the crude oil, Location of loading and delivery, timing of loading and delivery)

The economic factors inside of supply can be mentioned as below:

- Crude oil productions level, stocks level
- Refinery operations condition, and some setbacks in refining process
- Shipping possibilities and their cost
- Supply infrastructure, flexibility, and breakdowns.

The economic factors inside of demand can be mentioned as below:

- Refinery capability, and its operations
- Product prices
- Stock levels
- Season, climate weather.

The geopolitical factors: Can be mentioned as political tensions, civil protests, the act of terrorism and sabotage, labour union strikes as well as OPEC policies, news, rumours about political instability, market speculations etc. It must be bearded in mind the changes in oil prices is not only about the current level of supply and demand, it is also about the predictions on supply and demand in the future. That is why in some cases predictions about the disruption of supply and demand level are very imported determinant in oil price formation. Let us take an example of China. It is the world second biggest economy in the world with a phenomenal growth rate over the last decade. But the rumours and expectations about the slowing growth rate bring about speculation on less demand for crude oil and from crude oil derived products. This is currently one of the main influential factors in the determination of low oil prices. There is a strong positive correlation between the China`s growth rate and the level of crude oil prices.

Additionally, to the above mention factor, there is always the fear of potential disruptions of oil supply due to the distribution of main oil deposit in the regions with high potential for wars and civil strikes such as the Middle East and West Africa. Thus not only fear for the possible loss of demand due to economic reasons, financial crisis, and other disruptions, as well as the unstable

geopolitical situation in oil extractions site, has an influential effect on crude oil price determination.

The global supply and demand level are pretty neatly balanced in global markets. Any disruptions in this balance can have substantial effects on the price of crude oil. The Organization of the Petroleum Exporting Countries has a substantial effect or at least partially effect on the determination of oil prices. The members of the organization can decide in the level of supply for the sake of their own good. But as it will be explained below, sometimes the level of personal interests of each country surpass the common sense and mutual benefit. The organization tries to keep a stable and desirable price for the member countries.

Members of Organization of Petroleum Exporting Countries (OPEC) hold several meeting for negotiation to stabilize oil prices in the markets but could not do this in summer 2015. As the geopolitics factor is one of the main factors in the formation of crude oil prices, also the tension between Iran and Saudi Arabia has a considerable effect on this issue. Some members like Saudi Arabia, Russia want to keep oil production at its highest level as long as it does not fall below breakeven point. They do not show much willingness to sacrifice some of their current profit for the sake of potential future high return. This situation is also about the political tension and conventional competition between Saudi Arabia and Iran which are representing leading role respectively Sunni and Shia section of Islam. The entrance of Iran to the world crude oil market in such low prices will not allow them to modernize their oil industry and start competing Saudi Arabia in short-term time horizon. This issue basically can be explained by political tensions, rather than economic interest. In short, world leading commodity price is influenced by the division of religion which happened about thousand three hundred years ago.

Consequently, low oil prices affected very negatively to oil exporting countries. The continuation of current oil prices does not allow these countries such as Russia to build their annual budget and keep their currency strong against dollar and euro.

This problem leads to the issue of Dutch disease problem, which are widely discussed, recognized but has not been taken proper manners to decrease its consequences. Like many other petrol-states Russia, Venezuela, Brazil Azerbaijan faced this problem after the collapse of oil prices. This is not only the source of many macroeconomic problems but also increase the risk of rising social tension. The formation of State Oil Fund and its strong asset portfolio is main assurance of the

country to keep its macroeconomic stability and keeping its currency strong. Though, the local currency underwent evaluation twice in just one year floating currency level seems to become stable after the second devaluation.
In the root of all problems seems to be Dutch disease, which will be discussed in the next part of this thesis.

Dutch disease – curse of oil-extracting countries?

It is not a secret that oil prices are unstable. The price of oil in international market can be manipulated by the economic, political factors which are the reason why predicting prices for a long term is very complicated, sometimes impossible task. Experts started to warn the Azerbaijan government that building the country budget mainly based on unpredictable oil export returns is unreliable since the boom of the oil industry in the country. Moreover, oil and gas reserves are not infinite, they have limits. They will deplete within two, three decades in best projections. Thus any disruption in oil-gas export operations may impair accomplishment in market economy transition. Therefore, the country must accomplish the division of budgetary formation by relying on different sources in the economy.

Since 2006 Azerbaijan experience the huge flow of foreign currency particularly starting from 2005-2006 when huge oil pipeline Baku-Tbilisi-Ceyhan start to operate. It is a crucial factor to manage this process adroitly in order to avoid undesirable outcomes of Dutch disease.

The term of Dutch disease was fabricated in 1977 by "The Economist" to describe the decline of the manufacturing sector in the Netherlands after the discovery of a large natural gas field in 1959 (The Dutch disease, 1977). Generally, the term means, strengthening one particular field of the economy by neglecting the others. In our research scope, the term refers to intensive exploitation of natural resources and gradual decline in the manufacturing sector. Such approach to the economic management brings about serious problems in many countries where relying on primarily natural reserve returns in economic operations. These countries (Nigeria, Mexico) confronted the serious problem in accomplishing sustainable growth of the economy, as a rule.

Disproportionate economic management ends up with macroeconomic instability. It has been given the effect of Dutch disease during the interview that is given at the end of this research, prove the threat still remains in Azerbaijan economy. It will be given three main impacts of Dutch disease which is originated from economic management failure and threaten the macroeconomic stability (C. B. Rosenberg and T. O. Saavalainen, 1998)

Firstly, the appearance of the Dutch disease may bring about violation of foreign trade balance. The gap between export and import actions will grow in favour of import transactions. It is clear that oil boom in Azerbaijan triggers huge foreign currency inflow to the country. Excess of foreign currency increases demands to domestic currency. Thus domestic currency appreciates against the foreign currencies. Central Bank of Azerbaijan would tolerate to the appreciation in order to control inflation rate. Otherwise, huge entry of foreign currency will bring about the high rate of inflation, which the economy of Azerbaijan encountered once in the beginning of transition process. It is obvious that if the domestic currency rate appreciates, then import operations get more attractive for the country rather than export operations. High domestic currency rate will decrease the competitiveness of domestic product in the local and foreign market which is not pretty high yet, in Azerbaijan`s case. On the other hand, expectations from oil-gas revenues in upcoming period would trigger growth in local consumption and country spending, where less concentration would be given on export operations of the non-oil sector.

Secondly, continuous cash flow may weaken government policy on spending policy from the budget. Delusion in spending policy may end up the large budget deficit and long-standing interest payments in any fluctuation in oil export transactions. Consequently, the economy will be more dependent and fragile because of the oil-gas sector. Colossal revenues coming into the country may cause misbalance of payments. Countries which form its budget at the expense of "easy money" tend to get unreasonable credits and spend on prestige projects. In the end, unstable oil prices and other conditions, such as war condition in our case should leave the country in overwhelming debt burden.

Thirdly, Dutch disease in the country may increase misbalance of the workforce in the labour market. Highly qualified workers inclined to work in the respective field in order to fulfil personal interests and maximize earnings. The deviation of highly skilled worker to oil sector has increased

in Azerbaijan in accordance with the development of oil sector. It can be easily inferred that such unstable tendency in the labour market will hamper the development of the non-oil sector.

Early symptoms of Dutch disease are observable in recent years in Azerbaijan. In addition to the examples above it would be given two more examples that underpin the threat of Dutch disease in the country.

National currency, "Azerbaijan Manat" is exposed to the denomination in 2006. Five thousand (5000) former Manat was counted as one (1) new Manat after denomination. The denomination has strengthened the position of domestic currency against foreign currencies. On the other hand, the appreciation of domestic currency made import actions more attractive than export. As a result, non-oil sector drops far behind in comparison to an oil-gas sector where the country import textile, agriculture, industry goods presently. For example, about half of the import transaction consists of the agriculture products in Azerbaijan. It shows that the government must strictly contemplate of modern agriculture construction plan as one of the main directions of strategic economic policy.

Another symptom of Dutch disease is increasing oil dependence in budget formulation. According to the statistics of 2012, the formulation of 2013 budget heavily relies on the oil sector. 73.9 % of budget incomes are directly supplied by respective sector, as for the role of the oil sector in the budget increase, which is estimated to be 2.1 billion, is 90% (Gubad Ibadoglu, 2012). The share of oil export in entire export operations is equal to 90%. Considering the reason above we can say that the country suffers the Dutch disease which is the big threat post-oil economy. As it is seen from the figure 2 oil sector increases its share against non-oil sector year by year. Such tendency creates a relevant atmosphere for the appearance of Dutch disease in the country. Admittedly, the growth rate in the oil sector is not sustainable. After certain period growth index will drop. A strategic approach to the transition process of Azerbaijan`s economy requires more sophisticated planning and measures to be taken. , it is not a secret that oil prices are unstable. The price of oil in international market can be manipulated by the economic, political factors that are why predicting prices for a long term is very complicated, sometimes impossible process. That is why experts started to warn the Azerbaijan government that building the country budget solely on unpredictable oil export returns is unreliable. Additionally, oil and gas reserves have limits. They will deplete within two, three decades. Any disruption in oil-gas export operations may impair accomplishment in market economy transition. Therefore, the country must accomplish the

division of budgetary formation by relying on different sources in the economy. On the other hand, Azerbaijan will experience the huge flow of foreign currency particularly starting from 2005-2006 when huge oil pipeline Baku-Tbilisi-Jeyhan start to operate. It is a crucial factor to manage this process adroitly in order to avoid undesirable outcomes of Dutch disease.

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The Dutch disease which can appear in Azerbaijan discourages export operations in favour of import operations. It is obvious that if the domestic currency rate appreciates, then import operations get more attractive for the country rather than export operations. High domestic currency rate will decrease the competitiveness of domestic product in the local and foreign market which is not pretty high yet, in Azerbaijan`s case. Further, expectations from oil-gas revenues in

upcoming period would trigger growth in local consumption and country`s spending, where less concentration would be given on export operations of the non-oil sector.

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The national currency, "Azerbaijan Manat" is exposed to the denomination in 2006. Five thousand (5000) former Manat was counted as one (1) new Manat after denomination. The denomination has strengthened the position of domestic currency against foreign currencies at that time. But after the considerable decrease in oil prices weekend countries foreign currency balance. During just 2015 Azerbaijan had to undergo 2 consecutive evaluations of the domestic currency. The domestic currency manat depreciated against dollar nearly 100%. This fact again shows how important the role of SOFAZ in building macroeconomic stability. If the underlying foreign currency deposit were not available, the economy of Azerbaijan will collapse during this stress period.

During the time 2006, the appreciation of domestic currency made import actions more attractive than export. As a result, non-oil sector drops far behind in comparison to an oil-gas sector where the country import textile, agriculture, industry goods presently. For example, about half of the import transaction consists of the agriculture products in Azerbaijan. But Azerbaijan is not a poor country with poor soil condition. The dependence on import of agriculture products shows us again

that, the dependency on natural reserves need to be ended intentionally. Even if there exists favouring condition, without making the proper investment and applying best practices in the industry it is impossible to give up hydrocarbon reserves dependent economy to non-oil based economy. It shows that the government must strictly contemplate of modern agriculture construction plan as one of the main directions of strategic economic policy.

Another symptom of Dutch disease is increasing oil dependence in budget formulation. According to the statistics of 2012, the formulation of 2013 budget heavily relies on the oil sector. 73.9 % of budget incomes are directly supplied by respective sector, as for the role of the oil sector in the budget increase, which is estimated to be 2.1 billion, is 90% (Gubad Ibadoglu, 2012). The share of oil export in entire export operations is equal to 90%. Considering the reason above we can say that the country suffers the Dutch disease which is the big threat post-oil economy. As it can be inferred from the statistics, oil sector increases its share against non-oil sector year by year. Such tendency creates a relevant atmosphere for the appearance of Dutch disease in the country. Admittedly, the growth rate in the oil sector is not sustainable. After certain period growth index will drop. A strategic approach to the transition process of Azerbaijan`s economy requires more sophisticated planning and measures to be taken.

Investment and Risk Management

The investment strategy of SOFAZ

If we want to describe the investment policy of State Oil Fund with one word, this word will be would be Prudence. Basically, this strategy constructed on making a reasonable profit, by reducing, hedging risk to avoid considerable losses in fluctuation times. The real financial world cannot be fully described in financial models, such as CAPM. These models just help us to understand financial situation and make some predictions with reasonable probability. The construction of any financial model requires finance professional to reckon without considering all variables exists in the real world. Honestly saying to some extent it is not possible for a human being now.

Investors solely try to reduce the probability of substantial losses. As the finance, investment guru Warren Buffet said "never put all eggs in the same basket" or like old Chinese proverb "don`t check the depth of water with you both feet". These sayings refer to be being prudent in investment strategy. But it is also needed to elaborate the notion of being prudence. Does it mean basically buy only sovereign bonds with AAA grade?! Of course, it is the wrong strategy. Firstly, you cannot make a profit by being too risk-averse and buying only less risky securities. As a matter of fact, being too risk averse are punished by the market now. Some sovereign bonds such as German sovereign bonds ar

e issued with the negative interest rate. What does it mean? It can be explained from different perspectives. From the perspective of the simple consumer, it means that governments do not want them to save their wealth anymore instead to spend them. For investors, it means that there are no "safe harbours" anymore without paying fees.

Secondly being safe or less risky is the matter of belief and probability. The latest biggest financial crisis which is also known as mortgage crisis started from 2007 is a good example of this issue. In a financial world having AAA grade from credit rating organizations such as Moody's, S&P, Fitch does not necessarily mean to be guaranteed from the loss even bankruptcy. Indeed, Lehman Brothers which was found in 1850, America`s 4th biggest investment bank after Goldman Sachs, Morgan Stanley, and Merrill Lynch declared its bankruptcy in 2008. It is the largest

bankruptcy case in the USA so far. What happened to them, the company did have AAA rating. But if you were so naïve just to make your investment by relying on 3 world leading credit rating organizations, and put all your eggs into one basket you will probably lose all of your assets within months.

Then what can be the best option for the middle sized investment company in comparisons to those like Lehman brothers, a sovereign fund to choose? The simplest answer will be diversification. The investment strategy of SOFAZ also based on considerable diversification of asset classes, among G-7 countries and Turkey –Russia because of strategical ties to these countries. G-7 countries are chosen because of their competitive advantage in terms of macroeconomic stability, availability of transparent economic situation and developed financial institutions. All above-mentioned measure are taken in order to make sure continuous positive returns from the made investment as well as assuring the invested amount will grow over time and will not make substantial losses.

Although the day to day tactical decision is made within SOFAZ, general framework and investment guidelines are created and implemented by the supervisory board of SOFAZ and under the direct supervision of the President of Azerbaijan Republic. The investment policy is approved on a yearly basis by the president of Azerbaijan Republic. As the investment operation are conducted primarily in foreign currencies Rules on managing the foreign currency assets of the State Oil Fund of the Republic of Azerbaijan" ("Investment Guidelines"), approved by Presidential Decree No.511 of 19 June 2001 (SOFAZ annual report, 2014)

Similar to all other operations, the investment operations must be in compliance with existing framework in Azerbaijan and the legal framework where the investment are made. For example, when SOFAZ buys real estate in Japan or Russia although the legal framework in respective countries are different all the investment must be differentiated and adapt to the all domestic rules and regulations that have a connection with SOFAZ investment. The investment guideline is the general reference rule for the investment decisions. The guideline comprises which asset classes can be used in order to build the portfolio, in which currencies the invested asset will be kept, make clear limits of credit grades, which asset can be invested. In general, investment policy from which asset classes will the portfolio be constructed, in which currencies this strategically allocated asset will be kept, which benchmarks will be used to estimate the performance of assets, what are the

risk appetite for the fund`s investment which differs from asset class to asset class, from currency to currency, from country to country.

At first, SOFAZ followed the conservative strategy in its asset management operations. Through the time the available resources for investments increased. Starting from 2012 increasing returns allowed the fund to diverse its investment portfolio. The size of private equity fund increased in the portfolio of State Oil Fund. Additionally, increasing monetary returns allowed the fund diversify asset classes further, by investing asset classes such as equity, gold which demands rather bigger risk appetite.

By considering long-term objectives, the strategic asset allocations are reviewed and confirmed each year. Currently, investment guidelines refer to fixed income portfolio and money market instruments comprise 80% of the total investment portfolio. The equity portfolio rises to 10% of total investments, which show that the oil fund tends to increase its return on investments. The gold reserves made 5% of the total portfolio and finally real estate made 5% of total portfolio.

On the other hand, the reports of SOFAZ shows that in fact 87.5% of the total investment portfolio are constructed from fixed income securities, only 6.5% of the portfolio from equity, 2.9% gold, 3.1% invested in real estate. The dollar currencies prevail among assets denominations. About 50% of all assets are denominated in this currency, the euro is represented by 35% in asset denomination and GBP represented by 5% in total assets. The rest of assets are denominated in the currencies of other G-7 countries Turkish lira and Russian Ruble.

SOFAZ current investment strategy based on a mixture of traditional and alternative global asset classes. On traditional sides fixed income and public equities represented. The State Oil Fund builds its fixed income portfolio by owning sovereign, supranational, agency and corporate investment grade bonds, money markets instruments. The fixed income asset class comprise the biggest slice of the investment pie. This strategic allocation aimed at ensuring the maintenance of the underlying assets, and receiving a slight return on investment. But as one can expect fixed income assets is not riskless. The asset class exposure to bond and money market instruments. The public equities are also represented in rational side investment portfolio. This is implemented through MSCI World, S&P 100, and strategic stake in VTB Bank. The exposure risk exercised through the direct and indirect ownership of global equities.

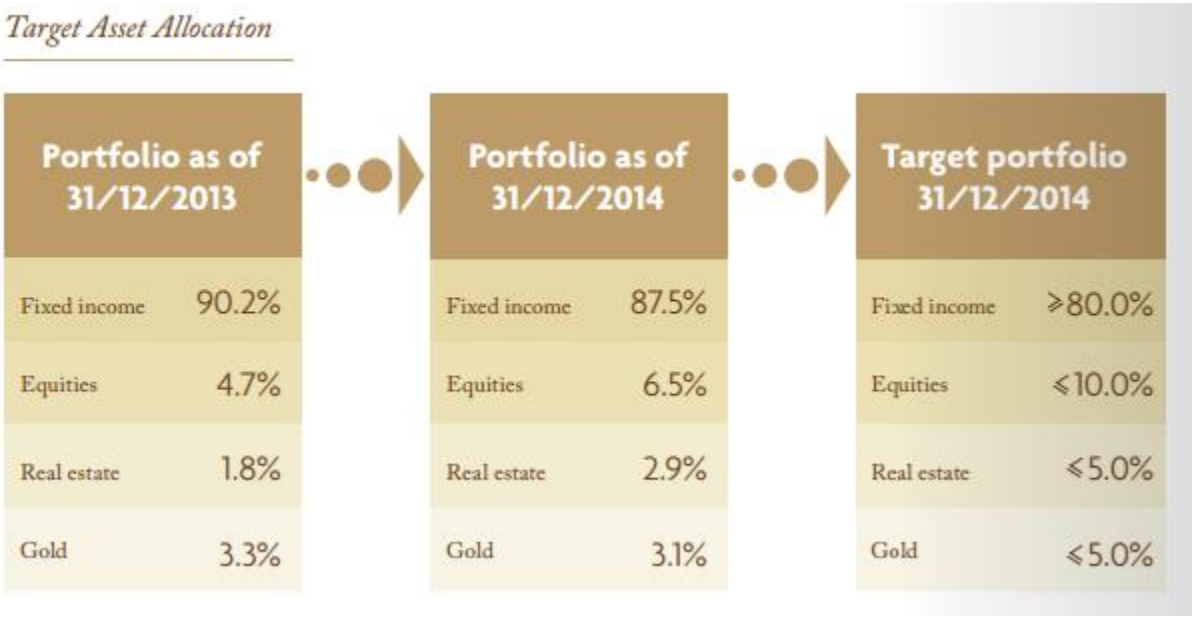


Figure 6: Strategic asset allocation

On the other hand, alternative investment funds are exercised, such as private equity, real estate, commodity. In private equity exposure to funding, investment is exercised. Particularly in the past 5 years, we can see intensive employment of this asset class, direct property stakes in London, Paris, Tokyo, Moscow. In commodity side exposure through the physical purchase of a commodity, investment in gold is observed.

General Asset Management Strategy of SOFAZ

The main essence of State Oil Fund lays on ensuring the security of collected asset in safest fashion available and generates additional income by effective application of asset management tools. The fund particularly pursues bringing all asset classes under internal management, which is also aimed to create in enhance investment process to a higher level. It is notable that more than 96% of the asset management are done internally. Only 4.4% of the underlying asset is controlled by external managers. Their experience in a certain asset or investment is expected to increase returns on

investments. These external managers included World Bank, Deutsche Bank, UBS Asset management etc.

The priority of prudence in asset management can be observed from allocation of assets in different foreign currencies, the accounts of Oil Fund outside of Azerbaijan Republic should be opened at the banks with a long-term credit rating not less than (oil fund.az):

- AA based on S&P credit rating scale
- Aa3 based on Moody`s credit rating scale
- AA based on Fitch rating scale

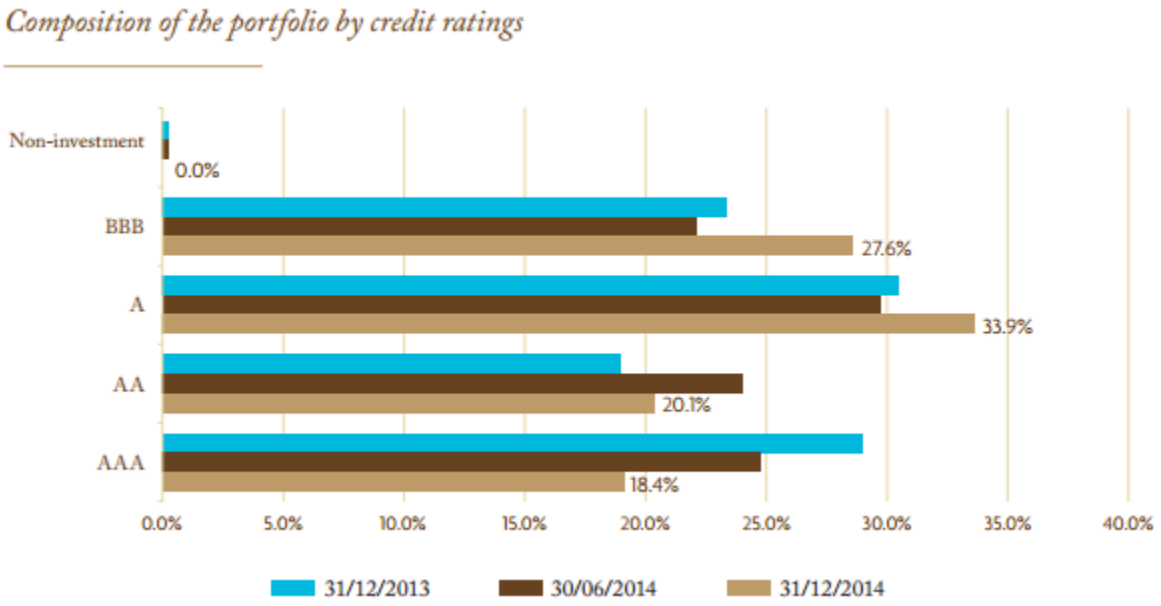


Figure 7: Composition of the Portfolio by credit ratings**.**

The amount of BBB and A rating securities increased their share in the overall portfolio. This might be one of the reasons that the revenues from the asset management exceeded by 2% and reached 387 million Azerbaijan manat.

This rule applies for depositary services as well. The main objective of asset management of SOFAZ is ensuring the security of underlying assets. The investments of SOFAZ in local currencies are always hedged against currency fluctuations according to USD. It is also very interesting to check the geographical distribution of asset classes. About 24.05% of assets are located in North America, 51.74% in Europe, 13.5% in Asia-Pacific region, 3.42 in South America,

1.23 in the Middle East, 6.01 in International Financial organizations. And the performance of the breakdown asset classes is in positive correlation with its location in majority cases. The geopolitical issues substantially influence the investment performance. Currently, the moderate stable global economy prevails. The median of growth rate in developed countries varies between 2-3%. This positive atmosphere in developed countries economies positively affects SOFAZ investments in North America and European Zone. Although in Eurozone the growth rate is little slower which varies around 1-1.5% it can be still regarded positive situation, bearing in mind Sovereign debt crises in Greece, and high sovereign debt of Spain, Portugal, Ireland etc.

The asset returns are assessing according to several benchmarks. The oil fund uses 3 months LIBOR to assess its fixed income and money market portfolio denominated in dollar currency, 3 month EURIBOR for assets denominated in euro. The MSCI World Index is used to assess the performance of the equity portfolio.

Fixed income markets

In fixed income markets it is observed historically lowest level. For example, 10-year German sovereign bond yields get lower from 2% coupon rate to 0.6% and then negative rate. This basically means that if you acquire this debt notes, you are punished and actually you pay for buying this debt. It can be seen as a metaphor. If you want to park your ship in the safest harbor available in stormy time, you need to pay parking fee

The 10-year German bond, which one of the safest place to preserve one`s wealth charges the buyer with the negative interest rate. If we just consider the inflation rate which is around 2% currently, in 10 years apart from negative interest rate also the inflation effect can substantially decrease the wealth. Because as we know money has time value. Which basically refers to the notion the money in your hand now is more valuable than let us assume after a year. In 10 year German sovereign bond even if the principles will be kept, inflation effect will make the current amount less valuable in 10 years. Bearing in mind this condition how the fixed income share of the general portfolio should be optimized?

The current trend shows together with increasing risk appetite the oil fund tend to diminish fixed income share of the general portfolio in favor of equities. Although the equity share of the portfolio is several times smaller than fixed income, this brought more return on investment than fixed income.

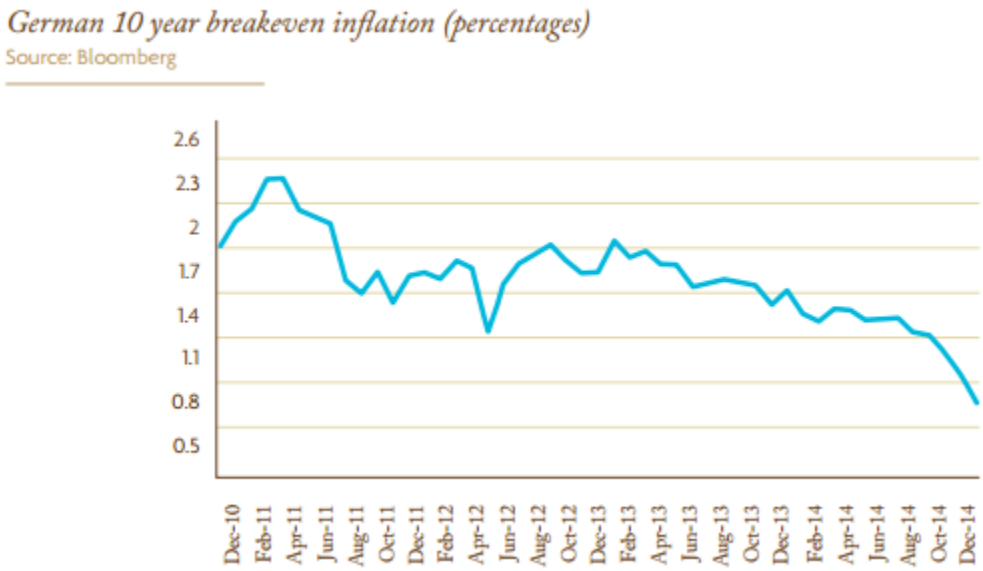


Figure 8. 10 years German breakeven inflation

As the return from fixed income shares decreases the yields get flattered. For example Germany sovereign debt note for 10 years decreased from 180-65 bps. Although yield curves in fixed incomes get flattered with negative slope, the credit spread maintains its low level. This allows the fund to preserve its available asset and make a relatively small return but keeping risk level in substantially low level.

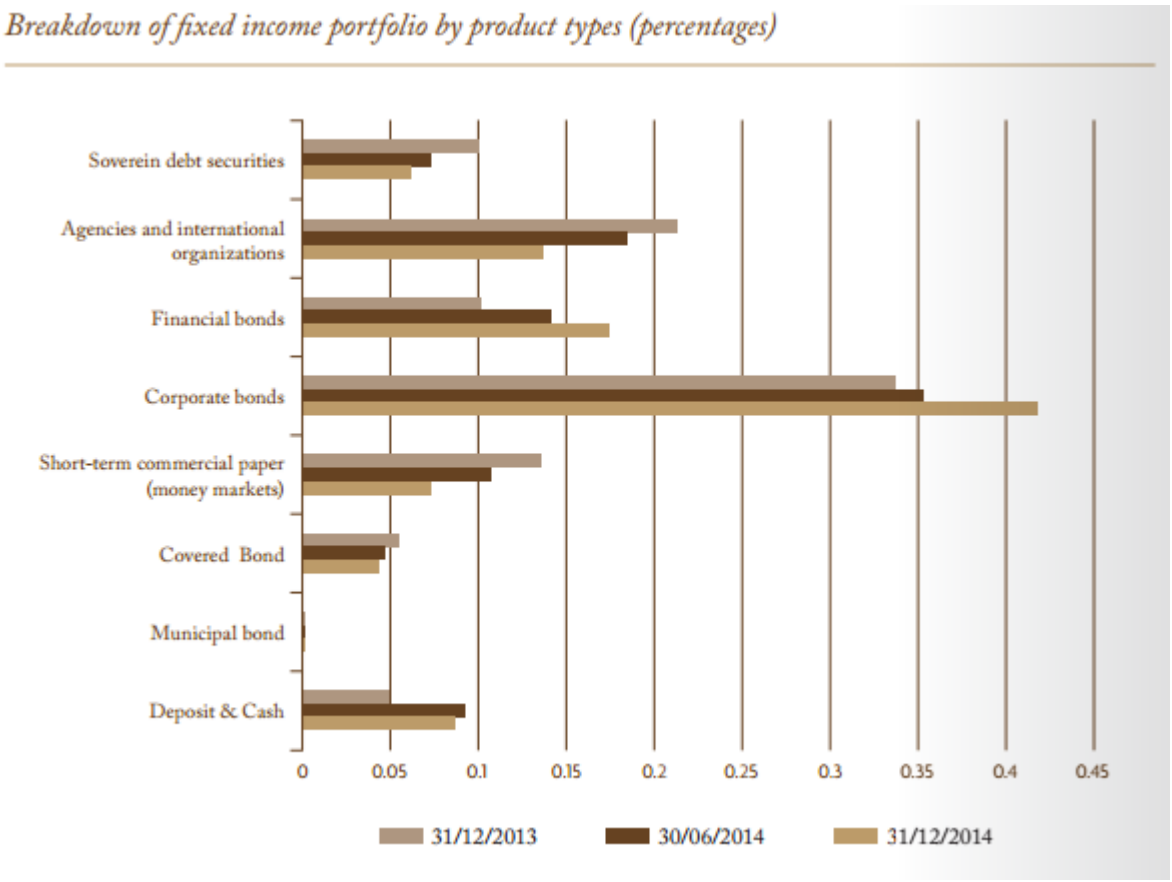


Figure 9. Breakdown of fixed income portfolio by Product types (source SOFAZ 2014 annual report)

As we can obviously see from the breakdown of fund`s fixed income portfolio the percentage of sovereign debt securities diminished over a one-year period from 2013 to 2014. It is mainly about the European sovereign debt crisis. Instead of sovereign debt securities the percentage of financial bonds, particularly graded corporate bonds increased. This done because there is uncertainty in sovereign debt securities and negative very small return.

Additionally, according to the diversification strategy, geographical differentiation of sovereign debt securities pursued. This strategy was chosen particularly increasing political instability in some EU member countries. Some economists such as ex-manager of Bank of England Mervyn Kings stated, political instability in European countries might lead the collapse of Eurozone (European sovereign debt crisis could cause Eurozone implosion - ex-BoE chief, Reuters website). The Central Bank of EU cannot proceed strict debt write-off policy because it might be a trigger

for overly in debt countries such as Greece exit from EU. This may bring about more problems and fluctuation in political and economic sphere than now with high probability. Therefore, this obvious solution is not applied by ECB (European Central Bank). The from chef Bank of England Marvin King assumes that if the deep and continues reforms omitted in the European economy, this might end with unprecedented crisis view near future.

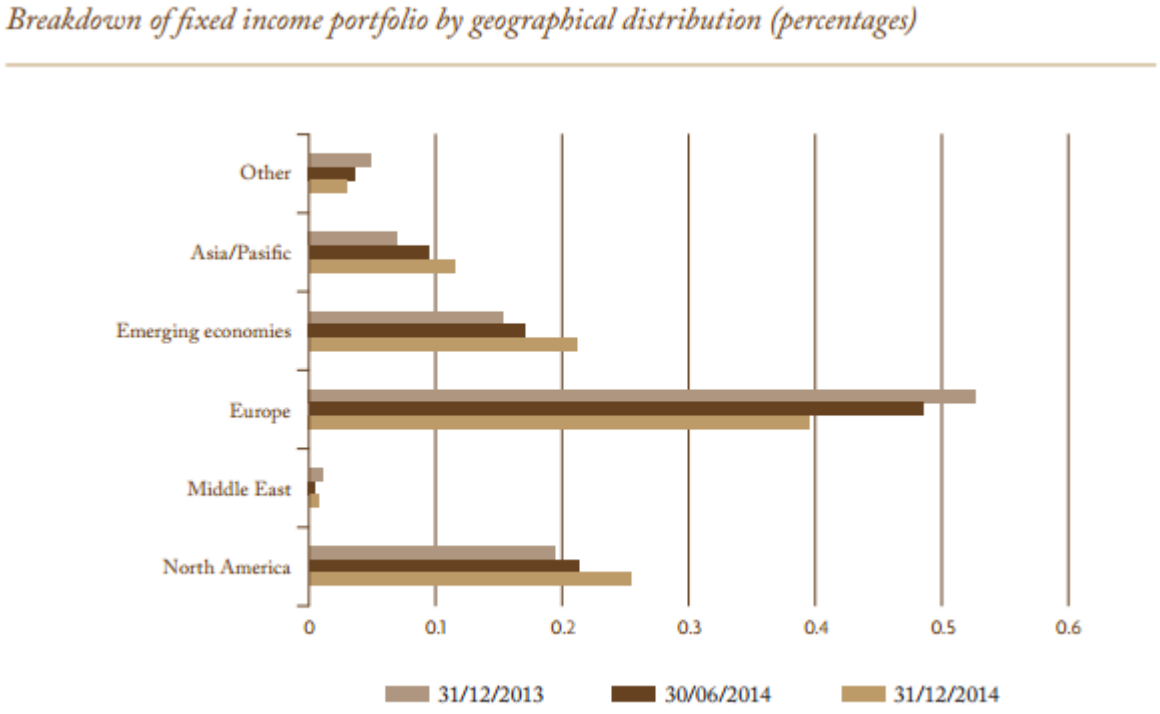


Figure 10: Geographical distribution of Fixed Income Portfolio of SOFAZ**.**

The meaning of the European sovereign debt crisis for SOFAZ is emerging the need of geographical diversification of debt note assets. As we mentioned above these assets are the main part of SOFAZ portfolio. If we look at the figures, SOFAZ decreased its exposure to Europe from 52.67 to 39 percent. The two main reasons for that which mentioned already above low yield from the European debt notes, sometimes even negative return and political instability and imbalance between European countries. In worst-case scenarios, the collapse of the euro might lead significant crisis.

On the other hand, emerging economies, Asia-Pacific region, and North America region receives higher allocated portfolio share due to relative better return from the assets and relative better stable conditions in comparison to European countries. For example, the North America exposure

increased by 5.63% in comparison to previous years. The same situation can be seen in emerging markets. The exposure of sovereign debt notes in emerging markets increased by 6%. Although the taken risk is higher, but the returns was satisfying from these investments.

The duration of the fixed income portfolio determines the time period of the debt securities will pay off the invested amount. In order to diversify the emerging risk in this asset class, the duration of debt securities is taken low. This will decrease the likelihood of adverse influence of changing interest rates. About 53% of the portfolio consists of fixed rates securities, 39 % from floating rate and about 8 % from the money markets. The fixed rated securities increased in recent years, to be able to benefit from flattening yield curves. The risks are also decreased by the diversification among different t industry types. The highest allocation goes to financials, industrials, consumer staples. This security is not only less risky but also more liquid securities.

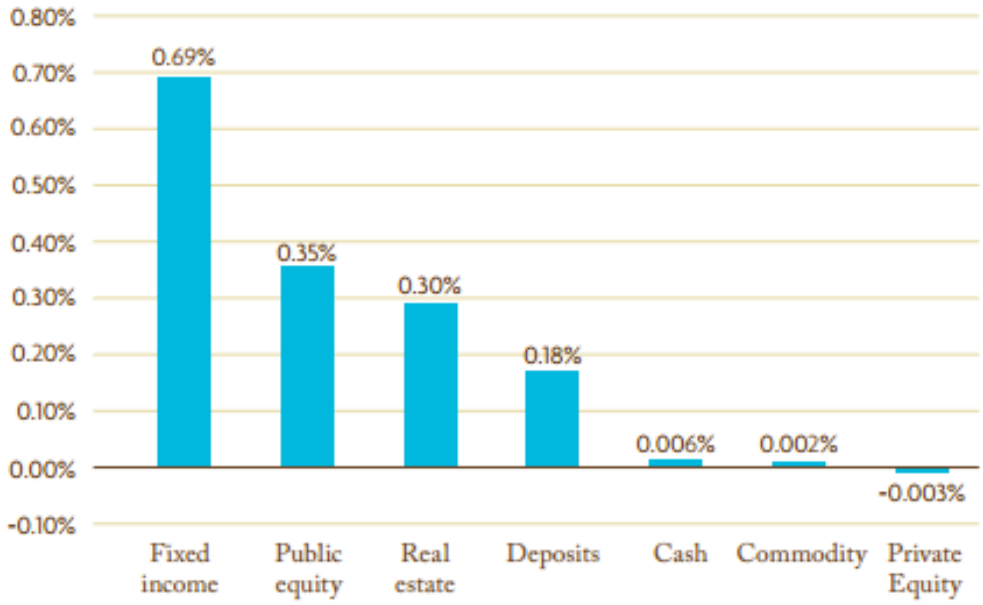


Figure 11: Contribution asset classes to total performance:

As it can be seen from the chart fixed income and public equity comprises the main drivers contributed the highest return on total asset portfolio, poorest performance was in private equity side. According to the latest reports, about 1.52% gained from investments. The share of fixed income portfolio in the cumulative return `reached 1.02%. The rate of return since 2012-2014

tends to decrease for the overall portfolio. In the background, the decreasing crude oil price and low rate of return from total portfolio must induce the government to decrease its spending and increase the efficiency of management.

Risk Management of SOFAZ portfolios

As it was already mentioned above that risk management plays an essential role for the State Oil Fund. The term of risk management is not only limited to identification of risks. It is also about assessment and prioritizing of risk according to their possible consequences. The risk management department at the fund deals with this identification, assessment and prioritizing the risks. The staff of risk management department at SOFAZ. Various tools and methods are used to minimize, mitigate and control the probability and consequences of undesirable events.

Uncertainty in financial markets brings about risks as well. The stuff of risk department pursues to minimize and in the event of occurrence to mitigate the consequences. The risk factor becomes particularly important during the period of market slowdowns and shocks. Every level of risk management based on globally admitted models and figures. The main risk sources for SOFAZ portfolios are credit risk spreads, price volatility, exchange rate volatility, unexpected change in interest rates. These risk can be measured by different indicators and models. For example, Value at Risk (VaR) indicator shows the consequences of worst case scenarios, what happens in worst 1% probability scenario. This is the highest loss the portfolio can suffer, which also called fat tails, Monte-Carlo and historical simulations methods are used to assess VaR of the portfolio.

The advantage of VaR risk assessment is to have clear image what will happen in the worst case, but it does not tell when this 1% probability will happen. Based on VaR indicator the State Oil Fund can predict how much is the amount of assets needed to cover possible losses. The disadvantage of VaR is that statically measurements are taken on normal market conditions. The time horizon must be taken into consideration. If the department takes the time horizon quite short for the day, week or month, the probability of worst case scenario tends to be quite low. But if we keep the time horizon for a long period the probability will substantially increase. It must also be considered that not all asset classes contribute the same amount of the risk to the portfolio. The

weight of each asset class becomes very significant here. In below chart, the risk contributions of each main asset classes are given. Although the weight of fixed income portfolio is dominant in SOFAZ portfolio is quite high, the risk contribution of fixed income and equity is quite close.

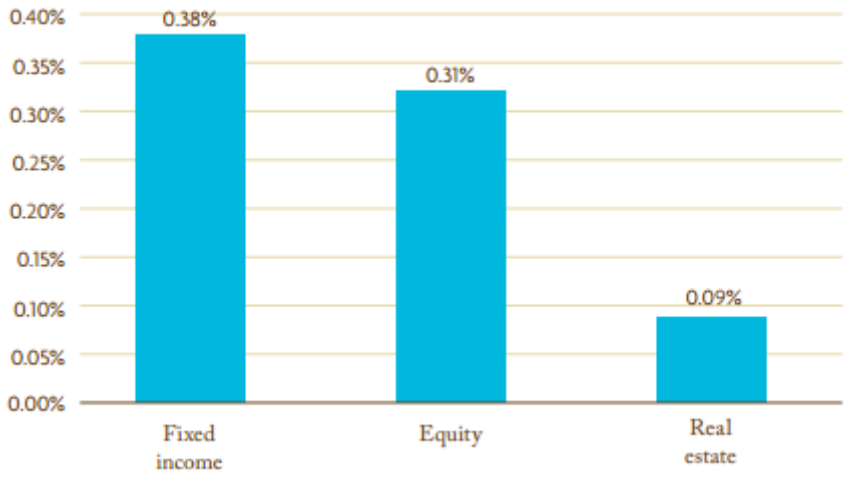


Figure 12: Risk contribution by asset classes.

Another problem with portfolio management is that the ratio between risk and return is not correlation. One of the basic models in finance states that the risk and returns in the market must be in correlation. This basically means that higher risk must be accompanied by a higher return. But in reality in global financial markets, the volatility of the financial markets is high, where the observed growth rate is pretty low. In the background of rising risks, perception decreased the accumulation of investment portfolio among and within asset classes. Various asset classes react the same risk situation differently and their return differs according to their locations. The risk contribution of different currencies to the total fixed income portfolio was USD -17.8 bps, Euro 8.7, GBP 0.3 bps.

Latest numbers from the official site of the state oil fund show that the fund was negatively influenced by the fall of oil prices. The latest figure shows that the asset of funds started to grow. In the first quarter of 2016, the assets have increased by 2% comparing to the start of 2016. The difference was from 33.5 billion to the 34.2 billion. It can be assumed the if the crude oil prices remain same and vary around 50 dollars, there is not a considerable risk for funds asset loss or another devaluation of local currency after 2 consecutive one happened in 2015 (state oil fund of Azerbaijan, First quarter report of 2016).

Interviews with the SOFAZ Co-Workers

First interview – 21 June 2016

Started at 18:16, finished 18:45

1) **What is your opinion about the general role of SOFAZ in the macro economy of Azerbaijan?**

SOFAZ plays a very important role in both the short-run and long-run functioning of the Azerbaijani economy. In the short run, SOFAZ preserves and grows through investment the country's natural resource capital. In the long run, SOFAZ serves as an intergenerational transfer mechanism through the redistribution of today's surplus income to the future generations of Azerbaijanis.

2) **How you assess the current strategic asset distribution of SOFAZ, which change can be seen in near future?**

SOFAZ is a sovereign wealth fund, and within its national role and legal mandates, the strategic asset distribution serves its function very well. SOFAZ purposefully strategically overweight fixed income securities since those are typically much safer than, say, the equity asset class. In the near future, no drastic change in the distribution is expected, and no such change seems to be needed. At most, subject to market conditions, a slow but steady transition towards a more "classic" 60-40 asset allocation, with a higher weight in equities, is to be expected.

3) **What is the role of risk management/investment department in the management of asset portfolio? (depending on the respondents**

Naturally, the two departments play a crucial role in the preservation and growth of SOFAZ's assets under management. Investments allocate the money across asset classes, either directly or through third-party asset managers. And the risk division monitors the investments' performance and current risk status on a daily basis

4) **What is your opinion of the role of fixed income securities in SOFAZ asset portfolio, what is your opinion about its size in the portfolio?**

SOFAZ is rightly cautious in its investment decisions, given the ongoing turmoil and uncertainty in global markets. The size of its fixed income portfolio reflects that. The fixed income asset class is a buffer against any negative movements in SOFAZ's riskier allocations, such as the equity or real estate asset classes. The role of fixed income will continue to be large, even if the Fund decides to gradually increase the aggregate risk of its portfolio by moving more aggressively into equity

5) **Is Dutch disease current threat for the country from your perspective? If yes which remedial action should be taken?**

The Dutch disease is present in all resource-rich economies of the world. The degree to which it is present and get combatted is a different issue. In the case of Azerbaijan, the formation of the State Oil Fund is still probably the most significant decision and accomplishment of the government. The Fund basically plays that role of a critical capital absorber, attempting to minimize the impact of the Dutch disease. The Fund, however, cannot and is not expected to completely isolate the country from outside shocks, such as movements in asset prices, economic conditions in the Eurozone or the US or Russia. In tandem with the fiscal apparatus and an accommodative monetary policy stance, the Fund sustains and assists the country's ongoing transition towards an oil-less economy

6) **What is your expectation about the near future of Azerbaijan`s economy?**

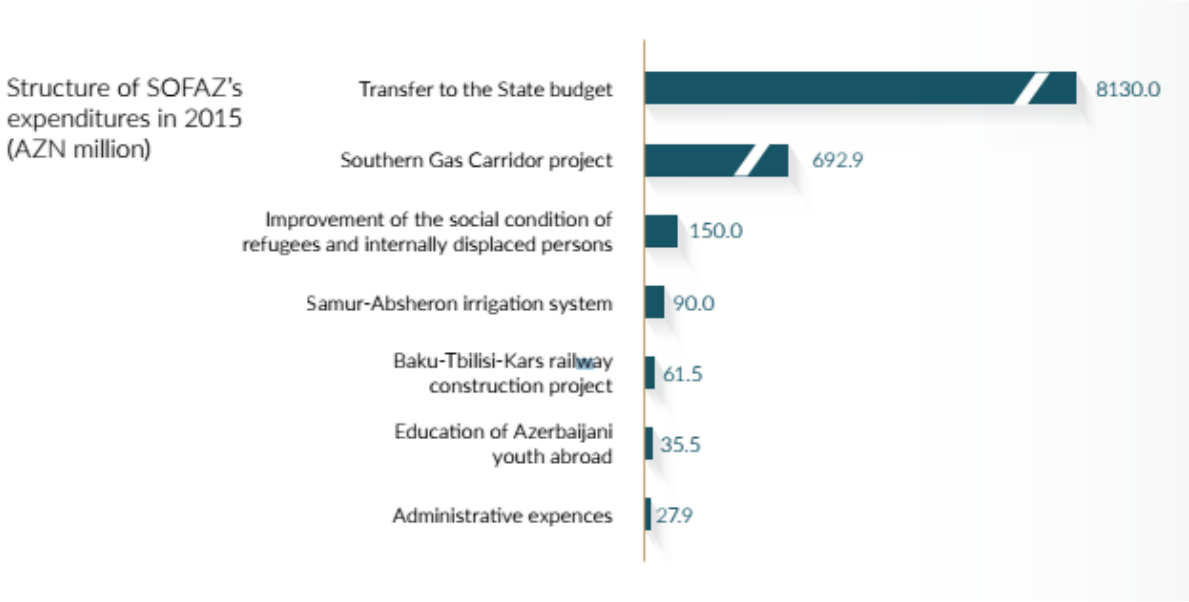
Back in the 1990s, only very few could have expected Azerbaijan to go such a long distance towards its status of a middle-income country. Based on what Azerbaijan has been able to achieve in the past 20 years, my expectations are such that in the next 20 years the GDP of the country will at least double. Moreover, the government will continue to diversify its economy, attract foreign capital into strategically important industries such as transportation and tourism, develop its domestic human capital, and create an attractive environment to start and conduct business

Second interview – 15 June 2016

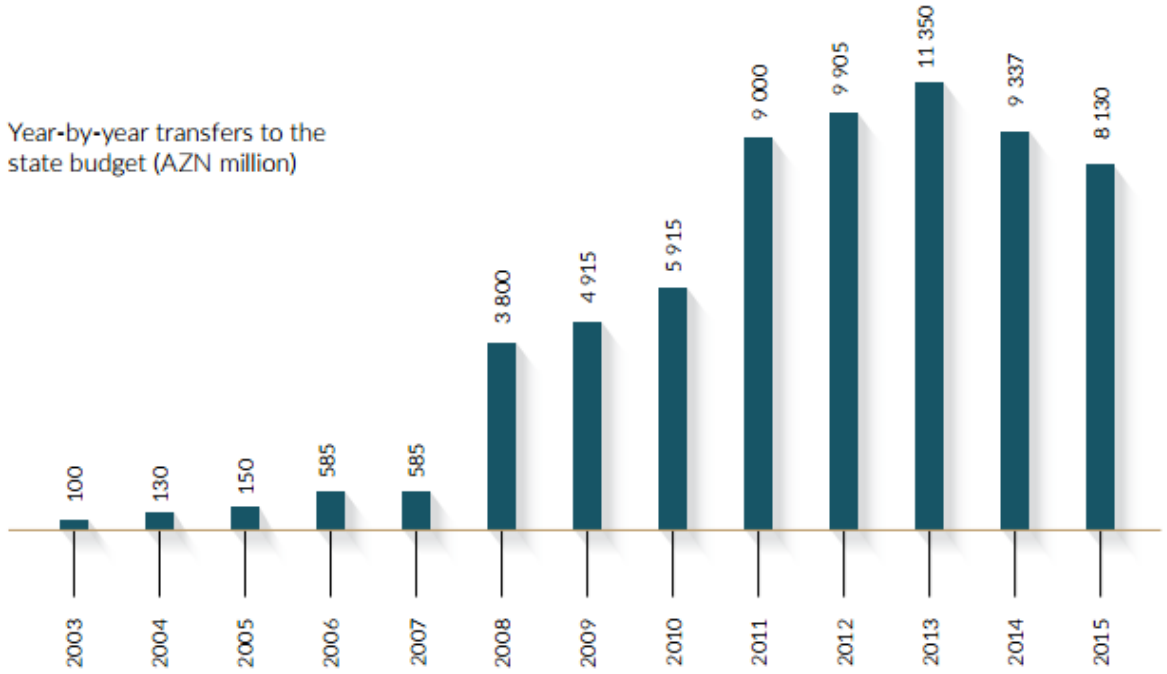
Started at 19:40, finished 20:15

1) **What is your opinion about the general role of SOFAZ in the macro economy of Azerbaijan?**

   Some sovereign funds have the mandate of return generation, the other sovereign funds founded to preserve returns for future generations. The State Oil Fund has both these two mandates from this point of view. Undoubtedly, the long-term objective is preserving returns from hydrocarbon reserves for future generations. On the other hand, the short-term objective of SOFAZ is stabilizing the macroeconomic situation in Azerbaijan. In order to achieve long-term objectives, investments, particularly with long time horizon, are made. The stabilization of the macro economy of Azerbaijan is pursued by two main strategies. Firstly, SOFAZ made regular transfers and contribution in the formulation of the annulling government budget. This is short term tactic of SOFAZ to stabilize financial situation to be safe and sound. This enables the government budget to be more stable against unexpected shocks due to global and regional financial crisis. Secondly, SOFAZ financially supports social projects to increase overall welfare in the. For example, in 2015 the expenditures of SOFAZ was 9.2 billion dollars. The 88.5% of this expenditures consist of direct transfer to the government budget, 11.2% was directed to the projects SOFAZ supports and a minor amount for administrative expenses. In the below chart, the main expenditure sources are given.



Another interesting issue is about rising trend in the direct transfers to the government budget. It has been started from 2003 and keep growing since then.



It is crucial to understand how SOFAZ accumulate its financial sources. Firstly, SOCAR (State Oil Company of Azerbaijan Republic) sells extracted oil incorporation with the consortium created in 1994 when the "Contract of Century" was signed. The share of Azerbaijan Republic which is equal to 75% accumulated directly in SOFAZ. Normally, government finance its expenses from collecting the tax, rely on the tax system. But in many instances, taxpayers cannot finance annual expenses of the government budget of Azerbaijan. In such instances, direct transfers from SOFAZ to the government budget employed. These phenomena can be also acknowledged as a problem in the middle and long term. The role of SOFAZ is collecting money in "good" times and spend in fluctuation time, which can be also regarded as one of the most important functions of finance, intertemporal transfers of the fund. Thus, we place a buffer against crude oil price fall. On the other hand, SOFAZ funded projects such as TANAP, TAP gas and oil pipelines, social projects are middle and short terms investments which are going to bring benefit for the future.

2) **How you assess the current strategic asset distribution of SOFAZ, which changes can be seen in near future?**

   The classic answer to this question is, it is not only aimed at to stabilise asset portfolio for future generation by achieving asset growth for them. In the beginning, we tried buying more liquid assets with low risk such as deposit, treasury bills bonds. Gradually, as risk appetite improved, stakeholders of SOFAZ permitted start investing more risky assets. The investment operations, all strategic decisions are made based in advance determined guideline. After amendment of prior determined guidelines in 2012, the portfolio of SOFAZ diversified to real estate, gold as new finance instruments. It is

well understood in SOFAZ that to meet the need of future generation the investment with risky assets with the higher return is inevitable. Therefore, according to 2015 guideline, the weight of equity in the general portfolio was increased 15% from 10% and the weight of real estate was increased from5% to 10%. It is also not excluded that as risk appetite evolves SOFAZ may increase the portion of risky assets in the portfolio (equity, real asset). The sovereign funds invest as pension funds. As we have long investment horizon, we have a higher ability to take the risk. These risks are bearable because the fund can take risks, for a higher return, plus the yields in the fixed income markets decreasing. This motivates us to diversify our portfolio in favour of risky assets classes.

3) **What is the role of risk management/investment department in the management of asset portfolio? (depending on the respondent`s department)**

The main role of investment department is certainly to achieve general return target. We are dealing with due diligence on a daily basis to achieve long-term return objectives by following, assessing, analysing daily opportunities in the market. By considering funds in advance we made regulations, investment operations are implemented by investment department. It is taken account fund`s risk and return objectives and constraints within given risk limit identify investment opportunities The role of risk department is mainly identify risks (interest rate risk, credit risk etc.), measure risks, manage risks. The constraint on investment based on ratings, constraints by sectors are made by Risk Management Department. For an example of investment regulations, 70% of the general portfolio must consist of fixed income according to new regulations. Before it was 80%, which did not allow us to generate a profitable

portfolio. After assessing the risk in markets, 80% fixed income asset class decreased to 70%. This asset must be liquid, in order to be able to make regular transfers to the state budget.

4) What are the roles of different asset classes within the portfolio?

The weight of Fixed Income Portfolio should be 70% but certainly, it does not happen instantly. The current weight is de-facto 80%, which will be gradually decreased to 70%. The fixed income assets are chosen from short-term, high-grade corporate and sovereign securities. It means that the fixed income portfolio optimization aimed predominantly for value preservation rather than return generations. The equity part of the general portfolio are chosen from high risk, high return securities. The weight of equities is increased in last years also for achieving diversification.

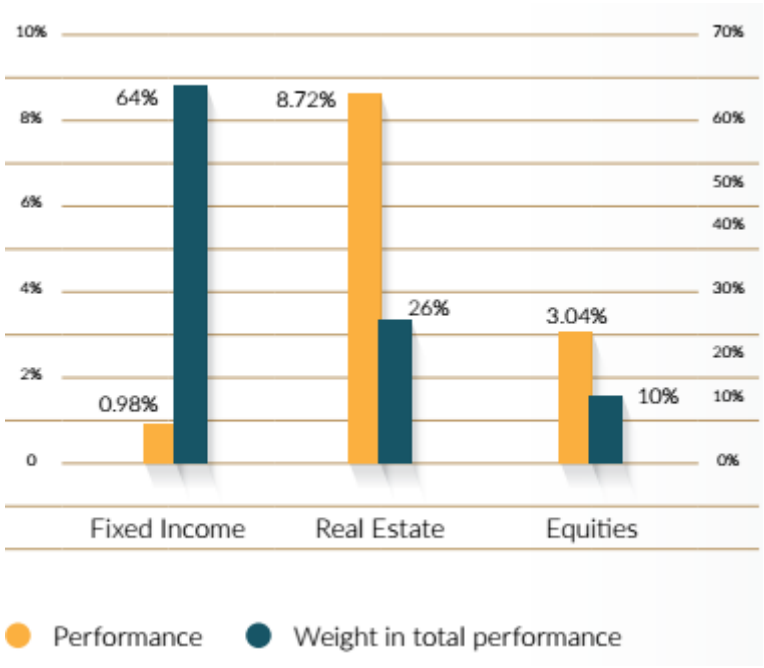


Figure 13: Performance of Asset classes and their contribution to overall performance

1.24% Rate of Return.

In addition to equity, real estate asset class weight has been increased significantly. This asset class is less liquid in comparison to equity but it is returned enhancer, and again used for diversification purposes. The gold is unique asset class which does not have income return, but it is perceived as a good hedge against unexpected events such as financial crises and inflation. And again a good tool for diversification.

4) **What is your expectation about the near future of Azerbaijan`s economy?**

Although the size of a non-oil sector in GDP rises yearly from a statistical point of view, but this increase mainly due to the construction sector. It can be quite relevant to check from which resources this construction projects financed.

The construction sector mainly financed from the state budget. And if it is financed from state budget it means basically non-oil sector also financed by the oil sector, by transfer from the State Oil Fund. By other words, the rise and fall of the growth of the national economy are still up to the trend of oil prices to a big extent. It is enough to state that, approximately 95% of export operations of Azerbaijan comprised of crude oil export. This brings about another threat to the national economy. If the oil prices fall unexpectedly then the inflow of foreign currencies dramatically decreased, which in its turn cause a devaluation of domestic currency. As breakdowns shows, it is impossible the real size of the non-oil sector was so big but the 95% of export comprised of crude oil. By supportive fact after the fall of oil prices starting from the middle of 2014 the currency of Azerbaijan, Manat underwent 2 consecutive devaluations in 2015. The local currency lost its value by 50% against USD. Fortunately, the government holds enough reserves in SOFAZ and the Central Bank of

Azerbaijan to swallow this shakes in the economy, also the foreign debt amount is low. But the reserves are not limitless, the Central Bank of Azerbaijan interventions to stabilise the position of Manat decreased its reserves to a considerable extent. Additionally, the foreign debt ratio in GDP raised by 15-40% due to the devaluation of domestic currency. I expect there is still room for making progressive reforms as the debt/GDP is low, the government holds big reserves. This reforms may consolidate the economic stability and absorb future shocks better.

Third interview – 19 August 2016

1) What is your opinion about the general role of SOFAZ in the macro economy of Azerbaijan?

As a sovereign wealth fund (SWF) SOFAZ has two main objectives: employing to preserve the macroeconomic stability and transformation of depletable hydrocarbon reserves into financial assets to generate perpetual income for the current and future generations. Most SWFs do perform a significant role in the domestic macroeconomic framework, as their activities should be closely coordinated with fiscal and monetary authorities, so to ensure with the overall macroeconomic policies. SOFAZ also do follow this trend by acting as a buffer to maintain the macro-stability of the economy as well as building a diversified investment portfolio to safeguard and enhance the value of accumulated assets. Since the establishment, SOFAZ has played a substantial role in terms of implementing different socio-economic and infrastructural projects to support the national economy and improve the local financial environment.

The main purpose of such projects is to intensify the development and modernization of country's infrastructure, encouraging of human capital development and accelerated development programs. Among the major social projects financed directly by the Fund the

improvement of the living conditions of refugees and internally displaced persons should be highlighted. Since 2001, SOFAZ has allocated approximately AZN 2 billion to this project which directed to minimize the level of poverty in Azerbaijan. The measures taken succeeded in decreasing the poverty rate among the refugees and internally displaced persons from 75% in 2002 to 12% in 2015. Another socio-economic project funded by SOFAZ is the "State Program on Education of Azerbaijani Youth Abroad in the years 2007-2015" which funded more than 3000 students to study at various well-known top rated universities around the world. Moreover, since 2008, the Fund has spent on this project overall AZN 156.8 million.

Apart from the social projects, SOFAZ actively involved financing the major infrastructural projects as well as the construction of Samur-Absheron irrigation system which served to improve the conditions in energy, water, and food security. As of 1 January 2016, SOFAZ allocated AZN 1.24 billion to finance for the implementation of this vital infrastructural project. Alongside this project, SOFAZ contributed AZN 737 million to realize Baku-Tbilisi-Kars railway project which enhanced the transportation system and transit capacity of the region's countries.

Furthermore, since 2013, SOFAZ started to finance several new projects within the cooperation State Oil Company of Azerbaijan Republic (SOCAR) including the government's share in the building of the "STAR" Oil Refinery Complex in Turkey. SOFAZ also financed the share of the Republic of Azerbaijan in South Gas Corridor project which will create an opportunity to transport Azerbaijani gas to European markets.

To sum up, above-mentioned important projects had an immense effect on the growth of the national economy over the years and SOFAZ will continue to actively participate in forming grounds for further diversification of economy which its turn will enable a long-term sustainable development.

Furthermore, in line with the important projects in above mentioned directions, SOFAZ will keep the sustainability of contribution to the welfare of the current generation through the transfers to the State Budget. It is also worth to indicate that, SOFAZ has a huge contribution in the development of domestic financial market environment through bringing the world-class asset management principles and practices into the industry.

2) **How you assess the current strategic asset distribution of SOFAZ, which change can be seen in near future?**

The core rationale behind the Fund's investment strategy is to build a diversified portfolio to maximize the risk-adjusted returns of the portfolio. What used to be a portfolio invested only in high grade fixed income securities nowadays is composed of diversified asset classes. The evolution of the investment portfolio has been in two directions during the recent years. On the one hand the allocation of equities in the portfolio has increased with the current strategy focused on full replication of well-diversified equity indices, with a degree of active management to reflect house view which is formed on the basis of internal research, covering a range of macroeconomic and structural drivers in each of the major economies and markets. On the other hand, starting since 2012 we have included the alternative asset classes, specifically real estate and private equity, into the investment portfolio to further diversify the portfolio and optimize the investment strategy. The shares of equities and real estate in the investment portfolio have been increased to 15% and 10% respectively. On parallel to asset class diversification, the geographical and sectoral based diversification has been a focus point of SOFAZ's investment strategy as well.

In addition, it should be mentioned that SOFAZ will continue to optimize and diversify a portfolio in the quest for maximizing returns within our constraints as our SAA team regularly follow up the financial markets, analyse the investment circumstances and opportunities through the research-based methodologies and do evaluate them appropriately.

3) **What is the role of risk management/investment department in the management of asset portfolio? (depending on the respondent`s department)**

SOFAZ's investment and risk management policies are mainly defined by "Investment Guidelines" and "Investment Policy" approved by the President of the Republic of Azerbaijan after the review of the Supervisory Board.

The Risk Management Department of SOFAZ is responsible for assessing investment activities, proposing changes to the SOFAZ's investment policy and strategic asset allocation (SAA), selecting benchmarks and defining the risk limits. One of the main aims of SOFAZ is to get the highest return possible on its investments without taking too much risk. On this purpose, the Risk Management Department identifies, measures and manages the risks it faces through using various models and analyses. The risk analyzes part could be divided into two parts: risk management on traditional and alternative asset classes.

In the traditional part, risk management techniques are applied to identifying, measuring and managing risks associated with fixed income securities and public equity asset classes. The department follows up the changes in the financial markets, exchange rates, interest rates and credit spreads regularly to measure the market risk and apply holistic risk management methodologies to minimize the negative effects to the value of the portfolio. In terms of the credit risk management, the department uses three major credit ratings agencies' reports to determine and pursue the changes, while also evaluates different credit risk models as well. On parallel to market and credit risks, the department also bear in mind the potential impacts of other risks such as liquidity, concentration, reputational and etc. to the value of SOFAZ's portfolio.

As alternative asset classes were included in the portfolio in recent years the involvement of risk management team to the management of those asset classes are in the initial stage compared to traditional ones. However, it is worth to add that dedicated team is now working on the development of various models to identify, measure and manage the risks related to real estate and private equity investments efficiently. Moreover, SOFAZ's Risk Management Department do conduct simulation techniques such scenario analyses and stress testing regularly to determine how the portfolio will behave during the extreme changes.

Finally, it should be noted that Risk Management Department is also responsible for performance attribution, modelling and research, compliance, and supervision of external asset managers.

4) **What is your opinion of the role of fixed income securities in SOFAZ asset portfolio, what is your opinion about its size in the portfolio?**

Acting as both savings and stabilization Fund, SOFAZ has been following a conservative approach to its investment policy, which is why made investments to conservative asset classes such as fixed income are higher over the years. The allocation of fixed income securities which characterized with a lower degree of risk has been gradually decreasing from 100% at the inception of the Fund to the 79.6% at the end of the first half of 2016. It should be added that as a result of updates to the Investment Policy dated to end of 2015, the share of fixed income securities should account for at least 70% (compared to 80% constraint previously) of the investment portfolio with the 5% lower deviations.

Bearing in mind that as a sovereign wealth fund SOFAZ is directed to long-term opportunities, fixed income securities will remain as the main part of investment portfolio due to its lower-risk and liquidity characteristics in the future. It is also worth to mention that the majority of exposure to fixed income asset class are in developed countries and securities which SOFAZ has an exposure should have an investment grade credit rating. Furthermore, fixed income sub-portfolio is well diversified across various industry sectors. The sectors receiving highest allocations are financials, industrials, consumer staples and consumer discretionary. In 2015, we continued the strategy of reallocating funds into Financial and Corporate bonds offering yield pick-up and SOFAZ also pursues the strategy of achieving geographical diversification of the fixed income portfolio.

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