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Identification of the degree of risk using financial statements

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Abstract

This paper is devoted to evaluating financial risk- its definition, components, factors and outcomes and the way it can be identified and analyzed by the use of data given by the financial position.

We attempt to directly address the roles of financial risk by examining the determinants of total firms' risk. In our analysis, we apply the balance sheet presenting the company's financial position at a single point of time in order to calculate and analyze the risks, namely capital structure risk, liquidity risk, and insolvency risk.

In the research result part I will provide my research results, how I calculated them, and also I will show the differences between these two companies.

As mentioned in the thesis, there are several principles and methods for estimating risk. However, I will concentrate only two main methods of analyzing the financial risk of the companies. Each of these methods will be analyzed in the thesis, and each one will be prepared and illustrated on the example of data for two companies (SOCAR and Pasha Bank) in 2015 and 2017.

The literature for this paper was collected using some books, research articles, and web sources. Analytical part is made using a comparative method of financing strategy from different huge companies in Azerbaijan.

Contents

Introduction	5
I. Theoretical basics of risk and risk management	7
1.1. Types and risk factors in financial management	10
1.2. The following financial risks are considered for the activity.....	17
1.3. Methods of insurance against financial risks	19
II. Methods of evaluation of financial risk	28
2.1. General methods of risk assessment	28
2.2. Defining financial risk and its components.....	31
2.3. Using balance sheet information to assess the financial risk.....	33
III. Financial risk assessment – an empirical study	36
3.1. Liquidity Ratio Analysis.....	36
3.2. Leverage Risk Analysis	42
3.3. Results of financial risk assessment.....	49
Conclusion	54
Reference.....	56
Annex	57

Introduction

Modern society is often described as “the society of risk”, which means that the social production of wealth is accompanied by the social production of risk. The financial crisis of 2008 had brought significant attention to the effects of financial leverage. There is no doubt that the high levels of debt financing by financial institutions and households has contributed significantly to the crisis.

Much of this contributed to the global financial crisis, the main harbingers of which were laid a decade ago, in 2008 began to rapidly gain momentum. The liquidity crisis, the increase in inflation and unemployment, the decline in GDP, the devaluation of the national currency, the suspension of production and the freezing of investment projects, unfortunately, have become integral satellites and attributes of the modern business environment.

Similarly, the challenges faced by the global economy and the sharp decline in the international oil prices in 2015 has also negatively influenced the economy of Azerbaijan, after the prolonged expansion owing to higher oil prices. Consequently, enterprises operating in such an environment are forced to take up different types of risk, in order to develop themselves and increase their effectiveness. Thus their exposure to risk is constantly growing.

To succeed in economic activities, people need to be entrepreneurial. But there is no risk-free economic activity. Therefore, the question is not to get away from the risk, but to find out its causes, to be able to calculate it, to plan in advance measures to minimize unforeseen losses, i.e., to reduce the consequences of the risk as much as possible.

There is a huge variety of corporate risks that are analyzed and classified considering different types of criteria. One of the most crucial types of corporate risk is financial risk.

The most significant of this document is analyzing financial risk of the companies using financial statements through the ratio analysis. In this paper I am focusing on the performance evaluation of two Azerbaijan's companies such as the State Oil Company and Pasha Bank, which are operating in different sectors. This research covered 2 fiscal years period: during the crisis, after the crisis of 2015.

Research object – conducting estimation of the firms' risk on the base of financial statements through ratio analysis.

Objectives:

- define the meaning of financial risk;
- examine the importance of financial risk in business;
- structure the methodology of evaluation of financial risk;
- present a detailed analysis of empirical research for selected countries;
- analyze and summarize the results of empirical research

To achieve the objectives of this paper the literature review of financial crisis and its impact previous researches in this area are performed. This paper comprises of an introduction, theoretical analysis, research methodology, research results and conclusions.

KEY WORDS: Financial risk, financial ratio, financial analysis, risk assessment, balance sheet.

I. Theoretical basics of risk and risk management

1.1. Types and risk factors in financial management

1.1.1. Definition and characteristics of financial risk

Risk can be defined as probability of an uncertain event or condition that, if it occurs, has an effect on at least one objective. For instance, regarding to Webster's dictionary, risk is defined as; possibility of loss or injury, someone or something that creates or suggests a hazard.

Financial risk arises in the relationship of a firm with counterparties — partners, financial institutions, and government agencies. The causes of financial risk are varied. These are the variability of the market conditions of a specific product, general price factors (inflation or deflation), variability of the state economic policy instruments (the Central Bank's discount rate, the required reserves rate, exchange rates, the cost of government bonds, etc.)

When examining the issues of financial management of a commercial company, it is natural to consider risk as an opportunity to reduce the planned profit and, the occurrence of losses. There are many risks of different nature that firms have to deal with, but according to the specifics of our research, so-called financial risks are of interest.

The financial risk of the company is assumed the possibility of the appearance in the future of undesirable financial shocks in the form of a significant reduction in income and loss and damage to capital assets in the face of the uncertainty of decisions taken at present.

Financial risk is one of the many risks in certain classifications. But its distinguishing feature is that practically all other types of risks of an economic entity, one way or another, approve themselves in the form of financial risk. In this regard,

financial risk is one of the most complex phenomena in the implementation of economic activity. Financial risk has the following main properties:

- **Economic nature.** This type of risk is inherent for almost all organizations engaged in economic activities and, ultimately, influences the formation of the company's profits and it is characterized by the fact that it can become a source of possible economic losses for the company in the process of implementing financial and economic activities.

- **Objectivity.** Financial risk - an objective phenomenon in the activities of any companies. Risk is the subject to the vast majority of financial transactions and virtually all are as of company's financial activity. Objectivity is comprehended in the sense that, unlike subjective risks, these risks do not depend on the wish of the management of the organization and are not controlled by it.

- **Probabilistic character.** Financial risk, like any other kind of uncertainty, has a probabilistic nature in the sense that such events may or may not occur. As I mentioned before, the probability of the implementation or non-implementation of risk events depends on a number of subjective and objective factors. Thus, the probabilistic nature is an attribute of financial risk.

- **The uncertainty of the consequences.** In the context of the financial risk of this factor is the evident in the indefinite nature of financial results, in particular, financial indicators such as income from the disposal of financial operations, ultimately, profit, and in some areas of financial activity the range of fluctuations of these results can be quite wide, indicating a high level of risk. Such cases require special attention from the financial top management of the company.

- **The inappropriate level of expected consequences.** If the company's management expects a certain income in the future, the deviation from this expected value can be either negative (lower income) or positive (higher income), and the risky situation occurs in the first case.

- **Volatility level of risk.** The level of financial risk of even a particular enterprise varies depending on the financial operation or type of financial activity. First, the degree of financial risk is subject to significant fluctuations depending on the duration of implementation. For example, all other things being equal, the risk of a long-term investment project is higher than a similar short-term one. Secondly, the level of financial risk varies greatly depending on numerous other factors of a subjective and objective nature, which, in turn, also change over time. For example, weather conditions are a typical representative of objective factors, the subjective factor is the human factor (meaning employees of enterprises at various levels)

- **The subjectivity of the nature of the risk assessment.** One of the important points of financial management is the assessment of financial risk. Unlike financial risk itself, its assessment is subjective in nature - it (the assessment) depends on a number of subjective factors of various nature:

- Subjectivity of the extracted information: its authenticity and completeness depends on the personality of its collector, the accuracy of the techniques used, devices, etc.
- Qualification of financial managers, their professional experience, knowledge in the subject area, skills in the field of risk management;
- Mood, health and other subjective data of the decision maker at the time of its adoption;
- Other subjective factors.

1.1.2. Types and classifications of financial risks and their factors

In view of the variety of classifications and generalizations of risks to which firms are exposed in the scientific economic literature, before proceeding to their description, let us consider some of the most common types of such financial risks of commercial firms. Such risks are very diverse, so it is advisable to study them from the point of view of their different groupings for their effective management. Consider some well-studied in the scientific literature classification of financial risks on the following grounds:

1. By type.

In this classification, the risk is tied to the factor with which it is associated. This allows you to assess the degree of risk, consisting of the following important components:

- the probability of an adverse event;
- the level of expected financial costs.

The scientific literature provides a huge list of types of financial risks. Consider some of them, representing the greatest interest:

The risk of reducing the financial stability of the enterprise. The main factor of this risk is the super-threshold riskiness of the capital structure – the presence of a huge share of borrowed funds in it. According to the degree of danger in the sense of the threat of bankruptcy of the company, this type of risk plays a major role.

Investment risk. This is one of the common risks. It is associated with possible financial losses resulting from the investment activities of the company and is among the dangerous risks.

Systemic risk. Systemic risk is not related to the activity of a particular company under consideration. This is a risk of crisis in the whole market. All firms are exposed to systemic risk, while individual risk is the risk of one company.

Individual (or corporate) risk (or enterprise risk). Unlike systemic risk, individual risk is the result of the activities of a particular company there can be both objective and subjective circumstances. Individual risk depends on many factors: the type of market, the behavior of the enterprise, the company's strategy, etc. for example, the risk of a firm that has a stable position in the market (a constant market share, stable buyers) and does not seek to breakthrough growth, differs from the risk of a firm that aims to capture larger segments of the market.

Liquidity risk – the risk arising in the process of sale of the company and associated with the possibility of deterioration of its property, plant and equipment (real estate, land, etc.) and working capital, decline in securities prices, etc.

The risk of low insolvency of the company. This is the result of the reduction or deliberately low liquidity of the firm's working capital, which is the result of an imbalance in the company's cash inflows and outflows over time. This type of risk belongs to the category of the most dangerous risks.

Selective risk is the risk of possible losses as a result of an unsuccessful choice of the investment object. Note that when calculating these losses, it is necessary to take into account not only the direct losses in this object (obvious losses), but also the lost profit due to the diversion of funds from a more profitable investment object (implicit losses). Here we are talking not only about direct, but also about portfolio investments.

Sectoral risk is caused by uncertainty of the future situation related to the characteristics of individual sectors of the economy. There are two main factors: the oscillatory nature of the processes inherent in the economy as a whole and its individual branches in particular (for example, known cyclicality in agriculture) and the uncertainty of the processes during the life of the product (according to the theory of the product life cycle) of a particular industry.

Country risk. This type of risk is associated with the situation in certain regions of the country. It is particularly evident in single-product regions. The economic situation of such regions largely depends on the market conditions of the products produced in them: there is a risk of toughening competition in these markets, and especially the fall in prices for these products.

In addition to these economic risks, there may be regional risks of non-economic content. For example, the military situation in the regions of Azerbaijan bordering Armenia is holding back economically profitable investments in the regions located there and, especially, in the mountainous Garabag, which is an integral part of Azerbaijan, despite the high level of unemployment in them.

Innovative risk. This type of risk is associated with the possible failure of the introduction of a new product or service, as well as new technology, the development of which, as a rule, requires high financial costs, which may not pay off.

Inflation risk. Notoriously, modern market economies are subject to constant inflation. This is due to the following circumstance. On the one hand, in a market economy, where prices are not directly regulated by the state, their variability is a natural phenomenon. But on the other hand, it is proved that the decline in the overall level, i.e. deflation, poses a much greater threat to the economy than inflation. Moreover, small (creeping) controlled inflation is good for economic growth. However, as a necessity for the national economy as a whole, inflation has a negative impact on the owners of monetary assets, as well as on the value of expected income. The situation is further aggravated by high inflation (galloping and, especially, hyperinflation). In order to mitigate the consequences of such situations, as a rule, the inflation premium method is used, i.e. the prices offered by the firm (including interest rates) are increased by the expected level of growth of the General price level.

Interest rate risk. In the previous proposal, we noted that under the influence of expected inflation, the interest rate is also subject to fluctuations. In addition, as an instrument of the monetary policy of the state, the interest rate (for example, the discount rate and the rate of mandatory reserves) is regulated by the Central Bank. Depending on the economic situation in the country, the interest rate may vary in one direction or the other. This, in turn, creates a new kind of risk.

Currency risk. Currency risk is associated with exchange rate volatility. It is known that the devaluation of the national currency has a negative impact on the financial position of exporting firms and a positive impact on importing companies. On the contrary, the revaluation of the national currency is beneficial for importers to this country, it is a risk for exporters from it. It should be noted that the last few years the last circumstance has taken place in Azerbaijan, having a negative impact on the export of firms operating in the non-oil sectors of the economy.

Tax risk. This is also a type of financial risk generated with possible increases in the tax burden for firms:

- increase existing tax rates or introduce new types of taxes;
- cancellation of existing tax benefits;
- increase in import duties or taxes (risk to importers);
- increase in export customs duties or taxes (risk for exporters), etc.

Deposit risk. It is associated with the probability of non-return of Bank deposits or deposits in such organizations (e.g. investment funds). The situation with non-return of deposits occurs mainly in three cases:

- banking crisis at the national level (in small countries such crisis can be initiated from abroad);
- bankruptcy of a single Bank;

-fraud in the banking sector.

With the latter type of investors everywhere faced in the post-Soviet space, including in Azerbaijan immediately after the collapse of the socialist system.

Credit risk. This risk is manifested in the borrower's failure to fulfill its obligations to pay. Here it is necessary to distinguish two subspecies:

-for banks and credit institutions, when the debtor is unable or unwilling to make interest payments on the loan and / or principal repayment;

- for firms operating in the real sector, this situation occurs when the firm releases a product or service with deferred payment, and the firm-buyer does not fulfill its obligations to pay.

Criminal risk. This type of financial risk is manifested in various variations :

- forgery of financial documents (is a widespread type of fraud);

- theft, including by its own personnel (for example, from the cash register or by illegal transfer) and theft of computer hackers;

- fictitious bankruptcy.

The described relationship of financial risks and factors can be summarized in the table 1.1:

Table 1.1. Types of financial risks and their the main generating factors

Type of risk	The main factors
The risk of reducing the financial stability of the enterprise.	imperfect capital structure
Risk of low solvency of the enterprise	the decrease in the liquidity of working assets
Investment risk	insufficient market research, the owners of the securities, volatile guarantees
Inflation risk	government regulation, increase in prices for basic resources
System risk	deterioration of market conditions for specific products in total
The risk of the business	conservative behavior of the enterprise, lack of innovative impulses or too little experience, youth
Selective risk	an unfortunate choice of the investment object
Liquidity risk	a rapid impairment
Country risk	monoproduction of the region, political and military factors

Industry risk	cyclic fluctuations and life cycle stage
Innovative risk	inadequate market research
Exchange risk	political and economic instability
Interest rate risk	government regulation
Currency risk	state regulation, foreign policy situation of the country, dynamics of export and import
Deposit risk	wrong assessment and the wrong choice of a commercial Bank
Credit risk	incorrect assessment of buyers of commodity or consumer credit
Tax risk	government regulation
Structural risk	high proportion of fixed costs
Criminal risk	dishonesty of partners and agents

1.2. The following financial risks are considered for the activity :

- *Risk of the company's overall financial activities.* It is determined by the market segment on which the company operates, its organizational and legal form (for example, individual labor activity or the classical form of partnership in the United States bear unlimited financial responsibility to its business partners), the structure of capital and assets, etc.
- *The risk of a single financial transaction* – the risk directly associated with a particular financial transaction (for example, the collection of money or the release of goods with deferred payment always represents a certain risk).
- *Risk of specific forms of financial activity*, for example, purchase of securities, investment in a particular project, investment or storage of monetary assets in a certain selected currency, any speculative activity.

1.2.1. On the complexity of the study:

- *Simple risk.* In the scientific literature, these include types of risks that do not break down into subgroups. Simplicity, in the e sense, is relative. For example, inflation, given as an example of simple risk, can be classified in different ways (for example, imported inflation affects importing firms more than local producers);

- *Complex risk.* In contrast to simple financial risks, complex risks fall into subspecies, each of which has a specific impact on the financial results of the company. Almost all of the above types of financial risks are complex (as can be seen from their description).

1.2.2. According to the sources :

- *Systematic (market risk).* This type of risk is described in detail above. We add that, affecting almost all firms operating in this market, systematic occurs in the following cases:

- during the deep economic turmoil;
- in dying markets (industries);
- with the deterioration of the financial market under study.

Examples of systematic risk include inflation, interest rate, currency, tax and exchange rate risk.

- *Individual risk (internal or enterprise risk)*. This type of risk is also discussed above. It is the result of unprofessional financial management, imperfect capital structure of the company, unjustified risk-taking activities, prone to adventurous financial transactions in the hope of high profits. Reduction of such risks is possible as a result of careful, prudent economic activity.

1.2.3. For the financial consequences :

- *Economic loss*. This type of risk involves one or more of the following consequences: a decrease in income, a decrease in the rate of return, a negative profit, etc.

- *Lost profit*. This risk arises in connection with, perhaps, an unsuccessful choice of the investment object. The money invested in a certain project, under certain circumstances, could bring more income.

1.2.4. By time factor :

- *Constant financial risk*. He accompanies the financial transaction for the entire time of its implementation. A striking example of financial risk of this type are representatives of systematic risks, such as inflation risk, currency risk, etc. Despite the permanent effect of such risks, in most cases they are of interest at certain moments and, in particular, in the final stage of a financial transaction.

- *Temporary financial risk*. Such risks are manifested in discrete moments-at certain stages of the financial operation. An example of this risk is the temporary seasonal insolvency of a successful farm.

1.2.5. In terms of financial losses :

- *Acceptable financial risk*. The unfavorable results of such risk do not exceed the company's planned profit from the implementation of this operation;

- *Critical financial risk*. At the same time, the unfavorable results exceed the profit planned by the company from the implementation of this operation;

- *Unacceptable financial risk*. The adverse result of such risk may be total or partial loss of equity;

- *Catastrophic financial risk*. The adverse effect of such risk may be total loss of equity and total or partial loss of borrowed capital.

1.3. Methods of insurance against financial risks

From the theory of corporate management it is known that there is a direct relationship between profitability and riskiness of the project: the greater the rate of return of capital, the greater the risk. In fact, if you assume the opposite, then, of course there will be an influx into this type of business, as a result of which, due to increasing competition, profits in this industry will fall and drag down the rate of return. Thus, the above principle can be violated only in the short term, after which the balance will come again. Therefore, in the pursuit of high profits, entrepreneurs are forced to be able to manage uncertainty. This activity was included in the scientific literature under the name "risk management".

Under risk management, we will understand the set of activities carried out by the enterprise and related to the reduction of possible undesirable consequences of financial transactions.

Risk management is a system consisting of the following elements :

- Risk recognition.
- Risk assessment.
- Risk management.

There are a variety of measures used in the risk management process. All of them are aimed at identifying specific risks, forecasting them and timely implementation of measures to mitigate their negative consequences.

The object of risk management management is capital investments and economic relations of economic entities during the implementation of the business project.

The subject of risk management is the appropriate group of managers of the company, exercising control over the object of management in order to minimize the negative effects of risk. This activity is effective in the case of information exchange between the object and the subject of risk management. As noted above, a certain category of information may constitute a trade secret, may be classified as intellectual property and, therefore, may be contributed as a share in the authorized capital of the company. Reliable, complete and reliable business information enables the decision-maker to quickly formulate a set of measures that reduce the level of risk and increase the expected economic indicators .

In the practice of risk management formed a certain set of rules for decision-making:

1. The degree of risk should correspond to the size of equity – losses from possible consequences should be covered by this capital.
2. All current decisions should also take into account the possible consequences of risk.

3. The final decision must be made only after all doubts have been dispelled – if doubts remain a risky decision is not taken.

4. The risk must be justified by winning.

5. You should not focus on one solution, you need to find alternative options.

Subjects of management distinguishes their approaches to the management of the risk object. In financial companies there are 4 groups of such approaches (table.

1.2.) :

Table 1.2. Approaches to risk management

Approaches to risk management			
Localization	Evasion	Compensation	Dissipation
System of restrictions	Rejection of very risky solutions	Analysis, insurance, control and monitoring of risk	Time risk diversification
Control object			
	<ul style="list-style-type: none"> - Stock risk; - Currency risk; - Direct credit risk (counterparty risk) 	<ul style="list-style-type: none"> - Concentration risk; - Individual liquidity risk 	<ul style="list-style-type: none"> - Currency risk; - Interest rate risk; - Stock risk; - Liquidity risk

Let us consider these approaches and methods of their implementation in more detail.

1. Localization (limitation). The mechanism of financial risk management is a widely used risk management tool. It greatly reduces the threat of financial risk.

This approach is applied mainly to those types of financial risk, the output of which is beyond a certain threshold is unacceptable, because the consequences of such a hike can be catastrophic. This mechanism is carried out by establishing appropriate financial rules and regulations within the enterprise. For example, if we are talking about portfolio investments, the following restrictions on the use of financial instruments may be imposed when applying this approach:

- fixing restrictions on the volume (in monetary terms) of the portfolio;
- restrictions on the share of certain categories of securities in the portfolio structure;
- establishing thresholds for losses in the portfolio as a whole and for individual securities.
- restrictions on the choice of issuers of securities, instruments used, etc.

As part of the application of restrictive regulations, the following set of measures can be used.

1.1 The maximum share of borrowed funds in the total amount of invested capital. At the same time, in most cases, a differentiated approach is applied with respect to different objects of financing. For example, a threshold can be set separately for the proportion of borrowed capital for fixed and working capital.

1.2. The minimum share of highly liquid assets in the total volume of all assets. This measure is being taken to create a "liquid cushion" - highly liquid reserve assets for the payment of unpredictable financial liabilities of the company. Highly liquid reserves include, for example, short-term investments.

1.3. The maximum size of the loan issued to one borrower. Here we are talking not only about the amount of Bank credit, but also about the volume of goods (services) issued on consignment, ie deferred payment. In this case, the restriction is aimed at reducing the concentration of risk.

1.4. Time limit on diversion of financial resources to accounts receivable. This limitation is associated with several risks at the same time:

- with possible deterioration of the debtor's solvency;
- with the inflation risk;
- with credit risk.

Finally, it should be noted that as an internal mechanism for mitigating risk situations, measures to localize financial risks, i.e. limiting the activities of managers who make decisions in certain areas, along with high efficiency, is a measure that does not require high costs.

2. **Evasion** of financial risk is also an internal mechanism of risk management of the company and is the enterprise measures that completely neutralize the negative consequences of a particular type of financial risk. Such measures include the following.

2.1. Complete rejection of excessively risky operations. The problem here is that almost all financial transactions involve a certain level of risk, and the task rests on the assessment of this threshold of excessive risk. It is for this reason that, although this measure is highly effective in avoiding risk, the application of this approach is limited.

2.2. Refusal to borrow in high volumes. This measure is aimed at eliminating one of the dangerous types of financial risks associated with the deterioration of the financial stability of the company. But it should be borne in mind that such a decision

may deprive the company of opportunities to participate in profitable (but expensive projects).

2.3. Refusal to use low-liquid working capital in large volumes. This measure is also aimed at reducing the risk of insolvency of the company. However, it reduces the flexibility of the enterprise, depriving it of the possibility of storage of insurance stocks of raw materials for operational production, as well as finished products for operational implementation. And this, in turn, threatens to lose (or the possibility of winning) part of the market, depriving the company to earn additional income and, accordingly, profit from the increase in production and sales.

2.4. Refusal to invest (most likely short-term) temporarily available funds. This measure is aimed against the following set of financial risks:

- Deposit, for example, in case of late return by the debtor.
- interest rate risk, for example, at an unreasonably low level of interest, for example, if this percentage is lower than inflation losses;
- speculative - in case the company invests these funds in securities, wishing to make money on the increase in the market price of this paper;

But this measure also actualizes other types of financial risk, such as inflation risk (for example, this money could be invested in raw materials and materials for production) or the risk of lost profits.

Comment. Our research in the framework of this work is aimed at the study of alternative options for investing temporarily available funds of the company by mathematical methods, and they consider all of the options listed here and other options for their use .

3. Compensation. This method is mainly limited to direct insurance of commercial risks. Through insurance, the company's property is protected from possible negative consequences of financial risks. As it is known, insurance

companies, i.e. insurers create special funds at the expense of funds (insurance premiums) received from insurance companies, which are used by insurance companies to pay their insurance companies in the event of insured events. During the insurance, the insurer provides insurance protection to the policyholder company for the financial risks stipulated in the insurance contract. As a rule, insurance companies offer insurance services for the main types of risk, both systematic and non-systematic. In addition, in modern insurance practice, insurance companies do not impose restrictions on the compensation of financial risks in the event of an insured event – the amount of payment of the sum insured depends on the real value of the object of insurance and the amount of the insurance premium paid, which can be paid by the policyholder once in advance or in parts during the validity of the insurance contract. Insurance services offered to enterprises by insurance companies on the market and provide insurance of their financial risks are classified according to the following criteria.

4. Dissipation or diversification. This is a widespread type of mitigation of the consequences of manifestation of risky situations, which consists in the fact that the company's funds and/or other resources are directed not in one, but in several directions. It is significantly different from other types of risk insurance. For example, as discussed in Chapter 3 of this work, the free cash of a real sector firm can be directed to a Bank Deposit, various securities, including government securities, the purchase of raw materials, etc.

A firm operating in the financial sector diversifies its monetary assets by investing them in a variety of securities, creating a financial portfolio. But in both cases, in order to optimize these investments, i.e. to find the optimal portfolio structure, research is needed, which requires certain professional abilities.

Thus, in contrast to the limitation, which sets the framework for the activities of employees and suppresses their initiative, diversification-on the contrary develops

their professionalism and creativity, requiring continuous improvement of decision makers.

Thus, diversification involves a variety of all possible objects of choice: suppliers, markets, customers, partners, activities, etc.

Let us consider the classification of risk distribution by subjects to which part of the risk is transferred and by objects for which diversification is performed.

4.1. By subjects:

4.1.1. Distribution of risk on individual financial transactions between partners.

This possibility arises from the fact that different business entities have different opportunities to neutralize the negative consequences of various risks. Therefore, it is advantageous to transfer a certain type of financial risk to a partner who can easily cope with it.

4.1.2. Distribution of risk among the participants of the investment project. This is similar to the previous case only with the difference that the firms to which the risk is transferred are not permanent partners of our company, and we were brought together by the implementation of a joint project. For example, if our company is the head in the project, it is necessary to try to shift undesirable consequences of some risks to subcontractors. These may be:

- risks arising from the poor quality of work performed by the contractor;
- risk of non-performance of construction and installation works in the period specified in the project;
- the risk of theft handed over to the contractor of building materials, equipment.

4.1.3. Distribution of risk between the firm and suppliers of working capital for it.

In relations with suppliers to the firm of raw materials should try to shift the risk of damage to these working capital during shipment and transportation. In international

economic relations between firms, there are special international rules governing the allocation of risk.

4.1.4. Distribution of risk among the participants of leasing relations. In view of damage of equipment and equipment during its operation during their leasing transfer, the lessor transfers to the lessee the risk of damage to the equipment when it is returned. In turn, the lessee shifts the risk of obsolescence of the lessor, the risk of reducing its performance (provided that the lessee complies with the rules of operation established by the instruction), as well as other types of risks stipulated by special conditions stipulated in the contract.

The factoring agreement by mutual agreement specifies the conditions that will determine the degree of risk distribution among the participants of factoring relations and, consequently, the level of risk neutralization for the company.

II. Methods of evaluation of financial risk

2.1. General methods of risk assessment

One of the most important issues of modern economic theory is the development of effective methods of financial risk assessment. Risks can be assessed using the following methodology:

- ✓ Risk assessment begins with the creation of an information base on the main issues that arise when working with money. Statistical data on the facts of errors in working with the bank (return of payments, delay of payments, etc.), buyers and suppliers (terms of contracts, payment discipline of contractors) are needed.
- ✓ Determination of losses and costs caused by risk situations in cash flow management.

It is necessary to distinguish between qualitative and quantitative assessment of economic risk. Qualitative assessment can be relatively simple and its the main task is to determine the possible types of risk, as well as factors affecting their level in the performance of a certain activity. Qualitative analysis is usually carried out at the development stage business plan showing the main ways and methods of risk minimization.

There are the following main methods of assessing the financial risk :

- statistical method;
- expert evaluation method;
- method of constructing a decision tree;
- analogy method;
- combined method.

Consider these methods.

2.1.1. Statistical method

The statistical method plays a primary role in risk assessments. It is a quantitative assessment of financial risk using methods of mathematical statistics. The main tools of this risk assessment method are: relative frequency, probability, mean, variance, standard deviation, coefficient of variation. The essence of the statistical method is that studied statistics of profit and loss, taking place on the same or a similar production, sets the magnitude and frequency of receiving some economic result and is the most likely future forecast.

A statistical method for quantifying risk requires a significant amount of data that are not always available to the entrepreneur. Data collection and processing may in some cases very expensive. Therefore, often with a lack of information it is necessary to resort to other methods.

2.1.2. Expert evaluation method

The expert method is usually applied in the absence of statistical data. To select an economic project, the following is done- processing the opinions of experienced experts. It is desirable that the experts accompanied their assessments with data on the probability of the occurrence of different loss values.

Each expert working separately shall be provided with a list of possible risks and it is proposed to assess the probability of their occurrence by the next grading system:

- 0 - insignificant risk;
- 25 - risk situation, most likely will not occur;
- 50 - on the possibility of a risk situation, nothing definitely you cannot say;
- 75 - A risk situation is likely to occur;

- 100 - Risk situation will come for sure.

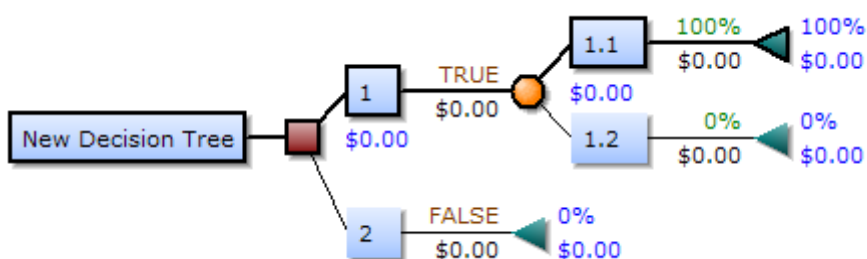
In order to avoid contradictions in experts' assessments, the difference between assessments for different experts on any type of risk should not over 50. To avoid the dominant opinion of the leader and to accept group decision, assessments are conducted anonymously. After processing of information, the result is communicated to each expert and without informing who gave every grade, the expertise is repeated.

Limits on the likelihood of loss on investments according to the experts' estimates, there is:

- for investments burdened with acceptable risk - 0.1;
- for investments burdened with critical risk - 0.01;
- for investments burdened with catastrophic risk - 0.001.

2.1.3. Method of constructing a decision tree

If you know all the actions you need to take you can use the decision tree. Its essence is that all variants of decisions, that is, the tree of decisions are graphically constructed. The branches of the tree are used to correlate subjective and objective assessments of possible events. Thus consider probabilities of possible outcomes. Following along the constructed branches, each path is evaluated, and then the path is chosen that can make the most profit. Graphically it is looks like this.



2.1.4. Analogy Method

When utilizing analogs, hazard databases are utilized comparative tasks or exchanges, examine works, venture works, and so forth of research foundations. The information got are prepared for distinguishing conditions in finished ventures so as to consider conceivable dangers in the usage of your task or exchange.

In practice, a combined method can be connected, similar to statistical method, the expert assessment method and the method the analogy.

2.2. Defining financial risk and its components

In the theory there are presented two conceptions of risk definition. The first – the negative conception depicts chance as a risk of potential loss. The second one – the impartial conception proposes that hazard isn't just a danger yet additionally a chance, so the hazard implies the possibility of getting results not the same as anticipated.

Thus the meaning of hazard depends basically on the methodology towards hazard and it might result in various moves made up by the managers. If there should arise an occurrence of the negative methodology, the fundamental point of the chiefs will be to limit the potential misfortune and attempt to stay away from unsafe activities, so as to balance out the circumstance of the organization. In the second situation, the directors won't just endeavor to limit the misfortune, yet additionally attempt to exploit the embraced hazard and improve the circumstance of the organization. Therefore financial risk, as any type of risk, can be analyzed from neutral or negative perspective.

Financial risk analyzed in this paper would be equal to the financing risk containing three components:

1. capital structure risk arising by using debt capital to finance part of the company's assets;
2. liquidity risk connected with the ability of the company to pay its short term liabilities by using assets that can be immediately converted into cash;

3. long-term stability risk connected with the sources of finance used to buy long-term assets (fixed assets) and long-term insolvency risk.

It is worth mentioning that financial risk in presented meaning is only one part of the general corporate risk. There are many others types of risk which should be taken into account while preparing an coordinated methodology to risk management process in the company.

In spite of various ways to deal with risk definition, modern organizations must know about their presentation to chance and should take up activities in a type of arranged risk the executives procedure aiming at acceptable level of risk This procedure incorporates three phases: analysis, manipulation and monitoring of risk. Risk management process begins with risk investigation, which empowers the organization to distinguish various sorts of risk, to perceive chance elements and to assess the potential outcomes of risk by estimating risk exposure. Next stage – risk control - incorporates various situations of activities that are set up for each kind of hazard. The organization can utilize assortment of hazard the board devices, both conventional (for example protection) and present day ones (for example subordinates), that ought to be customized to organization's interesting circumstance and necessities. Taken activities ought to be ceaselessly observed and controlled to check up their outcomes, contrast them with the arrangement and present change on the off chance that it is required. Hazard checking empowers the organization to figure the dimension of hazard and set up the organization's activities in future. In this way, the hazard appraisal is a consistent procedure that is a significant piece of the hazard the executives, and is acknowledged at the first and the third stage – chance investigation and checking of hazard.

There are many risk assessment methods – one of them is financial analysis, that can be used both at the stage of risk analysis and risk monitoring. Financial analysis is a financial management tool that uses different sources of information concerning company's past and current activities as well as its present and future financial situation. The most significant sources of information utilized in the monetary

investigation are fiscal summaries given by the bookkeeping framework, interpreting an organization's assorted exercises into a lot of target numbers that advise about the organization's execution, issues and prospects. Financial information incorporated into the fiscal summaries can be utilized to recognize the kinds of hazard and their components, to perceive the reasons and outcomes of the corporate hazard, to examine the consequences of hazard the board devices and to gauge the dimension of hazard in future.

It is worth mentioning that analysis of the financial risk can be set up for inward reasons for the organization and furthermore for the outside gatherings – that is any partners that are keen on surveying the budgetary circumstance of the organization (current and future) – these are predominantly investors and potential financial specialists, including lenders considering giving funding to the organization. Risk examination for this gathering of the announcement clients is somewhat unique in relation to for organization's inward purposes – as they are interested in the overall company's risk to estimate risk premium included in the expected rate of return on investment made in the company.

2.3. Using balance sheet information to assess the financial risk

The first element of the financial statement is the balance sheet presenting the company's financial position at a single point of time, including company's assets and the liability and equity.

By using balance sheet information the three components of the financial risk can be identified and analyzed: capital structure risk, liquidity risk and insolvency risk.

The second element of the financial risk analysis is related with liquidity. The basic analysis of the company's liquidity risk can be estimated by the usage of liquidity ratios based on the balance sheet information. There are three basic liquidity ratios: current, quick and cash ratio.

Notwithstanding liquidity proportions, so as to survey the liquidity danger of the organization, the dimension of net working capital can be determined and dissected. Net working capital is characterized as a component of the organization's present resources financed by the fixed capital and it very well may be determined as the contrast between current resources and current liabilities. Net working capital can be contrasted with complete resources showing the level of benefits that an organization conveys as net working capital. The primary job of the net working capital in the organization is the extra liquidity hold and it is considered as a standout amongst the most significant parts of the organization's quality. The larger amount of net working capital, the lower liquidity chance because of a more grounded liquidity condition, anyway the issue of the organization's proficiency ought to be mulled over too, as more elevated amount of net working capital is associated with greater expense of capital. So after some point, further increment in net working capital winds up inadequate.

The third component of the financial risk evaluation is associated with long haul solidness and budgetary parity of the organization. It is perceived that the organization keeps monetary parity, if its long haul resources are financed by long haul wellsprings of account, and momentary resources by transient wellsprings of assets. Something else, organization loses its money related equalization, which may prompt budgetary insecurity and issues with long haul dissolvability of the organization that may result in liquidation.

To dissect the money related equalization of the organization, two brilliant guidelines can be utilized. As per the primary guideline (I), fixed resources ought to be secured by value capital; just in this circumstance the budgetary equalization is kept up. Second guideline (II) is less prohibitive, as indicated by it, fixed resources might be financed by fixed capital incorporating value capital together with long haul obligation capital. On the off chance that in any event, the second brilliant guideline (II) is kept up, the organization keeps budgetary parity and its indebtedness chance is exceptionally low. Generally the danger of potential chapter 11 is noteworthy.

Summarizing, balance sheet information can be utilized to recognized and evaluate three segments of the financial risk demonstrating its degree, reasons and potential outcomes. Be that as it may, potential issues and confinements of the money related examination ought to be considered while utilizing this risk appraisal strategy. One of these issues is associated with the time slack between the day on which the fiscal summaries are distributed and the equalization day – during high market instability data exhibited in the budget reports can be invalid. This may prompt traps in estimating future working execution and money related condition dependent on past tends. Another issue results from the fiscal summary hazard, emerging from various strategies and systems of bookkeeping that can be utilized by the organization so as to improve its circumstance exhibited in the budget summaries and show it as better than it truly seems to be ("window dressing strategy"). Different zones of concern are associated with the determination of the suitable benchmark for correlation purposes and the correct elucidation of the proportions.

III. Financial risk assessment – an empirical study

A basic empirical study was conducted to illustrate the differences in the definition of financial risk on the basis of balance sheet information. The State Oil company and Pasha Bank were analyzed, focusing on changes in their balance sheet elements to ascertain changes in their exposure to financial risk. The analyzed period is 2015 and 2017, therefore, changes in the market situation and the overall situation in the economy may affect the financial position of the analyzed companies.

3.1. Liquidity Ratio Analysis

Liquidity ratios are used to determine a company's ability to meet its short-term debt obligations. Liquidity ratio is a basic segment of all dangers that influence the exercises of organizations. Financial specialists frequently investigate liquidity proportions when performing basic examination on a firm. Since an organization that is reliably experiencing difficulty meeting its transient obligation is at a higher danger of liquidation, liquidity proportions are a decent proportion of whether an organization will most likely serenely proceed as a going concern.

Any type of ratio analysis should be looked at within the correct context. For example, speculators ought to dependably take a gander at an organization's proportions against those of its rivals, its segment and its industry and over a time of quite a while.

Current Ratio

Liquidity ratios measure a company's ability to pay off its short-term debt using assets that can be easily liquidated. In this case, the current ratio measures a company's current assets against its current liabilities. In general, the higher figures are better, which means that companies have a greater number of current assets compared to current obligations and can easily repay their debt in the short term.

Year	Formula	State Oil Company of the AR	PASHA Bank
2015	Current Ratio = Current Assets ----- Current Liabilities	$\frac{13,964}{10,247} = 1.36$	$\frac{2,201,512}{1,848,678} = 1.19$
2017		$\frac{22,305}{19,846} = 1.12$	$\frac{3,858,295}{3,424,054} = 1.13$

Analysis: This means that the State Oil Company can meet its current short-term debt obligations 1.36 times over in 2015 . In order to stay solvent, the firm must have a current ratio of at least 1.0 , which means it can exactly meet its current debt obligations. So, this firm is solvent. It is good as it is operating with relatively low liquidity. However, in this case, PASHA Bank is a little less liquid than that. It can meet its current debt obligations and have a little left over. Furthermore, in both firms, the rate of ratio has decreased and reached about 1.12 times. Perhaps, companies may find it's hard to pay current liabilities by using their current assets.

Net working capital

Net working capital represents the cash and other current assets, after covering liabilities, that provide a company with the liquidity to invest in activities associated with operating and growing a business.

We apply net working capital as a financial metric to measure the cash and operating liquidity position of a business. The amount of net working capital a company has available can also be used to determine if the business can grow quickly. With substantial cash in its reserves, it may have enough to scale the business rather fast. Conversely, if the business has very little in cash reserves then it's highly unlikely that the company has the resources to handle fast-paced growth.

Year	Formula	SOCAR	PASHA Bank
2015	<p>Net Working Capital =</p> <p>Current Assets - Current Liabilities</p>	<p>13,964 - 10,247 = 3,717</p>	<p>2,201,512 - 1,848,678 = 352,834</p>

2017	$22,305 - 19,846 = 2,459$	$3,858,295 - 3,424,054 = 434,241$
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Quick Ratio

The quick ratio, otherwise called as the acid-test ratio, is a liquidity ratio that is more refined and more stringent than the current ratio. Rather than utilizing current assets in the numerator, the quick ratio utilizes an assume that centers around the most fluid resources. The main asset left out is inventory, which can be difficult to sell at market an incentive in an auspicious manner. The speedy proportion is more moderate than the current ratio and spotlights on cash, short-term investments and accounts receivable. The quick ratio are current asset that can be converted over to money inside 90 days or for the time being. Cash, cash equivalents, short-term investments or marketable securities, and current accounts receivable are considered quick assets.

Year	Formula	SOCAR	PASHA Bank
2015	Quick Ratio = (Cash & Equivalents + Short-Term Investments + Accounts Receivable) ----- Current Liabilities	11,450 ----- = 1.12 10,247	1,299,038 ----- = 0.7 1,848,678

2017	15,881	2,505,962
	----- = 0.8	----- = 0.73
	19,846	3,424,054

Analysis: In this analysis, State Oil Company’s quick ratio was 1.12 in 2015, which was able to meet its current short-term debt obligations. However, the rate of liquidity risk has dropped to 0.8 since 2017, which is less than 1.0 . This means that the firm cannot meet its current without selling inventory. In order to stay solvent and pay its short-term debt without selling inventory, the quick ratio must be at least 1.0 X, which it is not.

Similarly, the quick ratio for PASHA Bank was 0.7. In contrast, quick ratio for 2017 was 0.73. So, the firm improved its liquidity by 2017 which, in this case, is good, as it is operating with relatively low liquidity. It needs to improve its quick ratio to above 1.0 so it won't have to sell inventory to meet its short-term debt obligations.

Cash Ratio

The cash ratio is the most conservative of the three liquidity ratios. As the name implies, this ratio is simply the ratio of cash and equivalents compared to current liabilities. This ratio looks only at assets that can be most easily used to pay off short-term debt, and it disregards receivables and short-term investments. The argument for using the cash ratio is that receivables and short-term investments often cannot be liquidated in a timely manner. Receivables can be sold, or monetized, but the firm will not be able to get the full value of the receivables sold. Keep in mind

that, due to their high liquidity, short-term Treasuries are considered cash equivalents, not short-term investments.

Year	Formula	State Oil Company of the AR	PASHA Bank
2015	Cash Ratio = $\frac{\text{Cash \& Equivalents}}{\text{Current Liabilities}}$	$\frac{4,881}{10,247} = 0.48$	$\frac{1,021,306}{1,848,678} = 0.55$

2017	5,217	1,465,771
	----- = 0.26	----- = 0.43
	19,846	3,424,054

The cash ratio is the most preservationist of the three liquidity ratios. As the name suggests, this proportion is basically the ratio of cash and equivalents contrasted with current liabilities. This ratio takes a gander at assets that can be most effectively used to satisfy momentary obligation, and it disregards receivables and short-term investments. The contention for utilizing the cash ratio is that receivables and momentary ventures regularly can't be sold in an opportune way. Receivables can be sold, or adapted, yet the firm won't almost certainly get the full estimation of the receivables sold. Remember that, because of their high liquidity, short-term Treasuries are considered cash equivalents, not short-term investments.

Analysis: As the companies does not have enough cash & cash equivalents and marketable securities to cover for current liabilities, the cash ratio is less than 1. Hence, for every manat of current liability, the companies only have around 0.4 of cash and marketable securities to pay for it. Nonetheless, the company has other current assets that it can liquidate to be able to settle its current obligations. In addition, the State Oil Company's cash ratio declined less than 0,5, which indicates inability easily pay off short-term debt.

3.2. Leverage Risk

Financial leverage ratios, or gearing ratios, comprise a category of ratios that evaluate the financial leverage a business in terms of its assets, liabilities, and equity.

These ratios assess how much a business' capital originates from obligation, which demonstrates how dangerous or not a business is from the point of view of its utilization of obligation with respect to its advantages and value. As such, influence ratios enable us to perceive how much resources of an organization are originating from the credits of a business substance.

A higher financial leverage ratio demonstrates that an organization is utilizing obligation to fund its advantages and tasks, versus an organization with a lower cash related influence proportion, which shows that, regardless of whether the organization has obligation, its activities and deals are producing enough income to develop its benefits through benefits.

Debt-to-Equity Ratio

Year	Formula	State Oil Company of the AR	PASHA Bank
2015	Debt-to-Equity Ratio = Total Debt ----- Total Equity	25,306 ----- =1.72 14,648	1,860,250 ----- = 4.3 432,489

2017	39,372	3,459,266
	----- = 1.8	----- = 6.93
	21,975	499,149

The most used leverage ratio is debt equity ratio. Through this ratio, we acquire an idea about the capital structure of the organization. Debt-to-equity ratio assess the ratio of a business' total liabilities to its stockholders' equity. It implies that if a company is too dependent on debt, then the company is too risky to invest into. On the other hand, if a company doesn't take debt at all, it may lose out on the leverage.

A high debt/equity ratio is often associated with high risk; it means that a company has been forceful in financing its development with debt.

Analysis: In this analysis, we can view that the debt to equity ratio of State Oil company is about 1.8 in both years: A greater than 1 ratio indicates that the portion of assets provided by creditors is greater than the portion of assets provided by stockholders. So it appears that higher leverage ratio indicates higher risk.

In case of PASHA Bank, the rates of risk are much higher in both years. Moreover, the leverage risk increased from 2015 to 2017 reaching 6.93. Consequently, higher debt to equity ratio as risky because it shows that the investors haven't funded the operations as much as creditors have.

Debt-Assets Ratio

How much debt an organization takes to source its benefits would be known by debt-to-asset ratio. This leverage ratio can be an eye-opener for some speculators.

This leverage ratio discusses how much assets can be sourced through debt. At the end of the day, if assets are more than debt (in ratio), that implies it's appropriately utilized. Be that as it may, in the event that the advantages are not as much as obligation, at that point the firm needs to take a gander at use of its capital.

Year	Formula	State Oil Company of the AR	PASHA Bank

2015	Debt-to-Assets =	25,306 ----- = 0.63	1,860,250 ----- = 0.81
	Total Debt ----- Total Asset	39,954	2,292,739
2017		39,372 ----- = 0.22	3,459,266 ----- = 0.87
		61,347	3,958,415

Analysis: In this analysis we identify that the State Oil company's ratio is less than 1, the debt levels are manageable and the firm is considered less risky to invest or loan to given other factors are taken into consideration. Furthermore, the rate of risk has decreased till 2017 which shows the improving of performance of the company. Similarly, PASHA Bank with a DTA of less than 1 shows that it has more assets than liabilities, so it is less risky. Therefore, the companies have more assets than the loans which is quite a good sign.

Interest Coverage Ratio

This ratio measures the protection available to creditors as it determines the events over the EBIT can cover the interest expense. . Notwithstanding whether an association were to carry high debt levels, the ability to service the debt and convert the interest expense offers comfort.

A higher proportion shows a superior money related wellbeing as it implies that the organization is increasingly competent to meeting its advantage commitments from working profit. Then again, a high ICR may recommend an organization is "excessively protected" and is ignoring chances to amplify income through influence.

Year	Formula	SOCAR	PASHA Bank
2015	$\frac{\text{Interest Coverage Ratio} = \text{EBIT}}{\text{Interest Expense}}$	$\frac{- 1,584}{427} = - 3.7$	$\frac{18,944}{24,335} = 0.78$
2017		$\frac{2,516}{1,326} = 1.9$	$\frac{112,790}{89,372} = 1.26$

Analysis: As we can see, times interest earned ratio is not meaningful in 2015 because SOCAR's performance had negative earnings before interest and taxes, at (3.7). However, the ICR of the State Oil Company went up to 1.9 in 2017. This means that has makes 1.9 times more earnings than her current interest payments. This is a good sign because it shows company risk is low and its operations are producing enough cash to pay its bills. Therefore, companies are liquid and shouldn't have problem getting a loan to expand.

Regarding PASHA Bank, the proportion was less than 1 in 2015, it means the bank was not making enough money to pay its interest payments. It could not even pay the interest on its debt. Hence, this bank was beyond risky, but the situation has improved rising the ratio to 1.26 in 2017. Perhaps, the company is making more than enough money to pay its interest obligations with some extra earnings left over to make the principle payments.

Return on Equity

Profit for Equity (ROE) is one of the Financial Ratios that utilization to gauge and evaluate entity’s profitability based on relationship between net profits over its averaged equity. Two fundamental significance components of this proportion are Net Profits and Shareholders' Equity.

It measures a firm's efficiency at generating profits from every unit of shareholders' equity. Return on equity shows how efficiently companies use investment funds to generate profit and grow the company.

Year	Formula	SOCAR	PASHA Bank
2015	Return on Equity= $\frac{\text{Net Income}}{\text{Equity}}$	$\frac{(1,584)}{14,648} = -0.1 \sim 10\%$	$\frac{14,383}{432,489} = 0.03 \sim 3\%$

	Shareholders' Equity		
2017		<p>2,092</p> <p>----- = 0.09~ 9%</p> <p>21,975</p>	<p>89,092</p> <p>----- = 0.18~18%</p> <p>499,149</p>

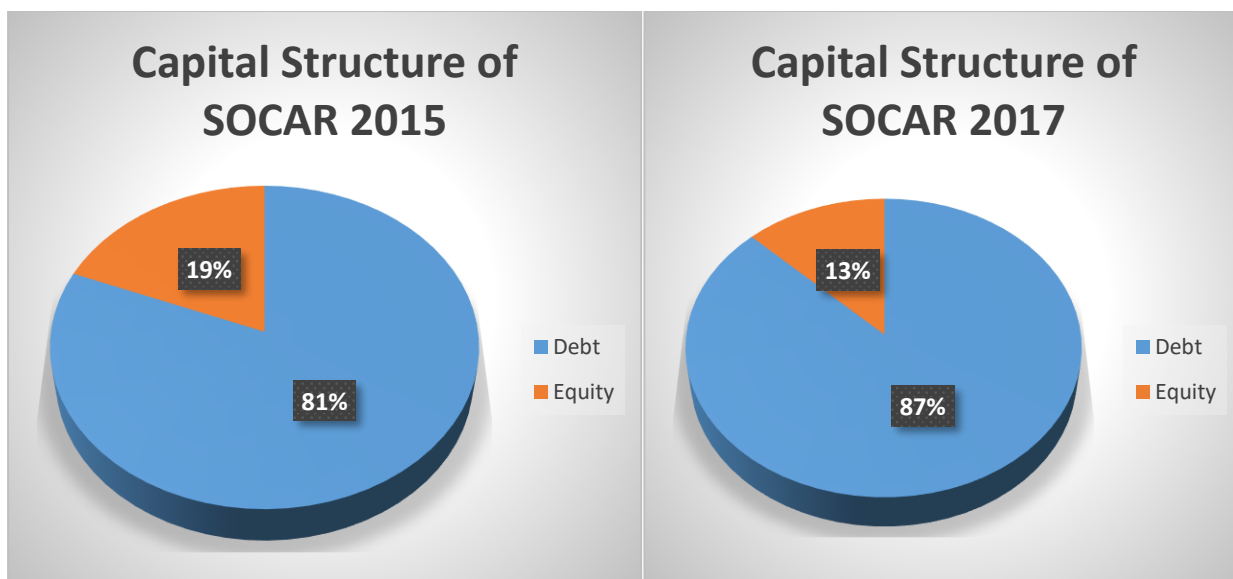
Analysis: In this assessment we can see that SOCAR's profitability proportion did not change throughout the years and remained stable at around 10%. In contrast, the performance of PASHA Bank has grown from 3% to 18% during the years. It means that the bank is able efficiently generate money from shareholders' fund.

3.3. Results of financial risk assessment

Actually, there are just two strategies for the financing of the organizations. A) The first is debt. The essence of obligation is that you guarantee to make fixed installments later on (interest payments and repaying principal). In the event that you neglect to make those installments, you lose control of your business. B) The other is equity. With equity, you do get whatever money streams are left over after you have made debt payments.

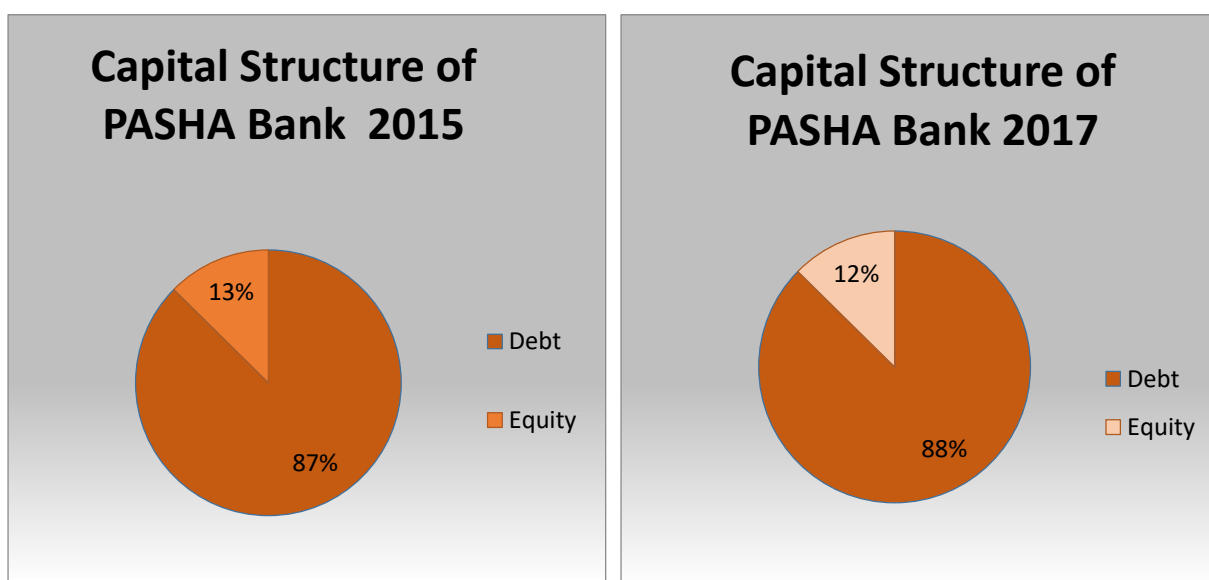
Regarding capital structure of SOCAR, it is clearly seen that 81% of capital made up debt in 2015. The value of debt capital had increased since 2017, which means that debt is biggest proportion of capital(Figure 1)

Figure 1.



In terms of capital structure of PASHA Bank, in 2015 the most proportion of capital consisted of debt, at 87%. Similarly, the rate of capital structure did not observe bigger changes and debt value remained almost the same at 88% in 2017(Figure 2)

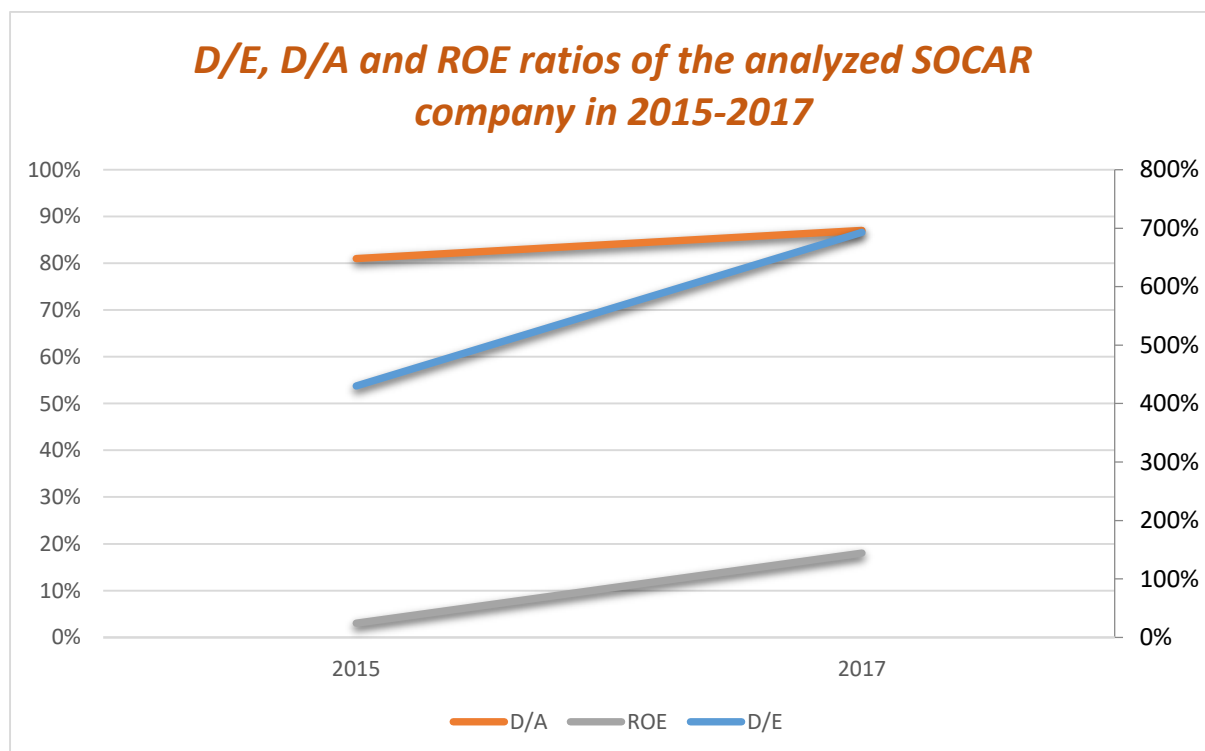
Figure 2.

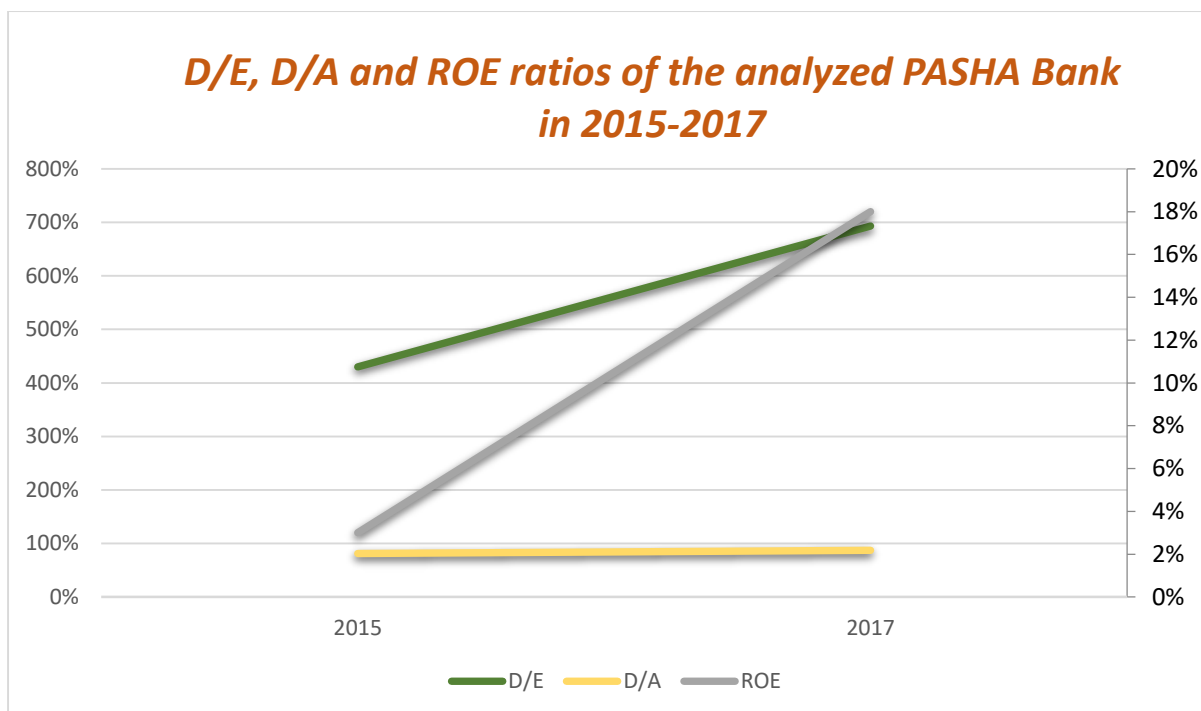


Next step of the empirical research is devoted to the problem of capital structure changes determined by D/E and D/A ratios, together with the changes in the

profitability of equity capital measured by return on equity ratio (ROE) are demonstrated on figure 3.

Figure 3.





From this graphs, the leverage ratios of SOCAR company increased significantly from 2015 to 2017. Values of D/E and D/A ratios were high throughout the years. Although the rate of D/E rose dramatically, the value of D/A remained unchanged during the years. It means that around 80% of assets were covered by liabilities. Actually, these rising of ratios inform that the analyzed companies decided to use more debt capital than equity.

One should here pose the question – what is the reason of such decisions? The answers can be varied, as each of the companies may have other motives for such variations - to list only the most probable ones: difficult access and high cost of equity capital, availability of the debt capital. Perhaps, negative consequences of the financial leverage can lead to the form of bankruptcy costs, if they cannot properly allocate capital.

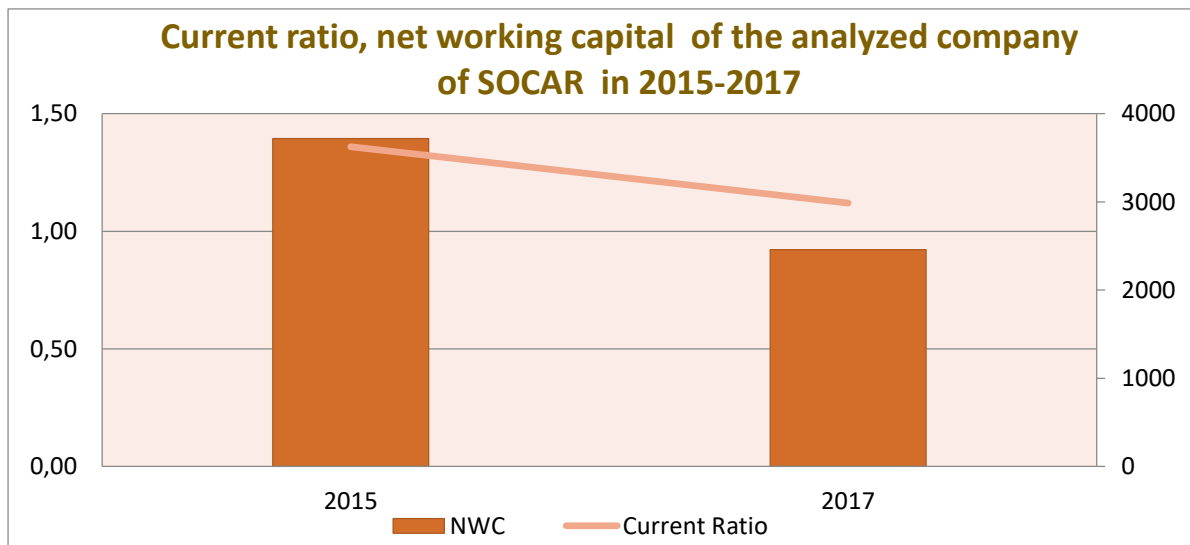
Interesting result can be made by analyzing changes in the capital structure together with the adjustments in the average ROE ratio. It is recognized that one of the motif of using debt capital is to receive the beneficial effect of the financial

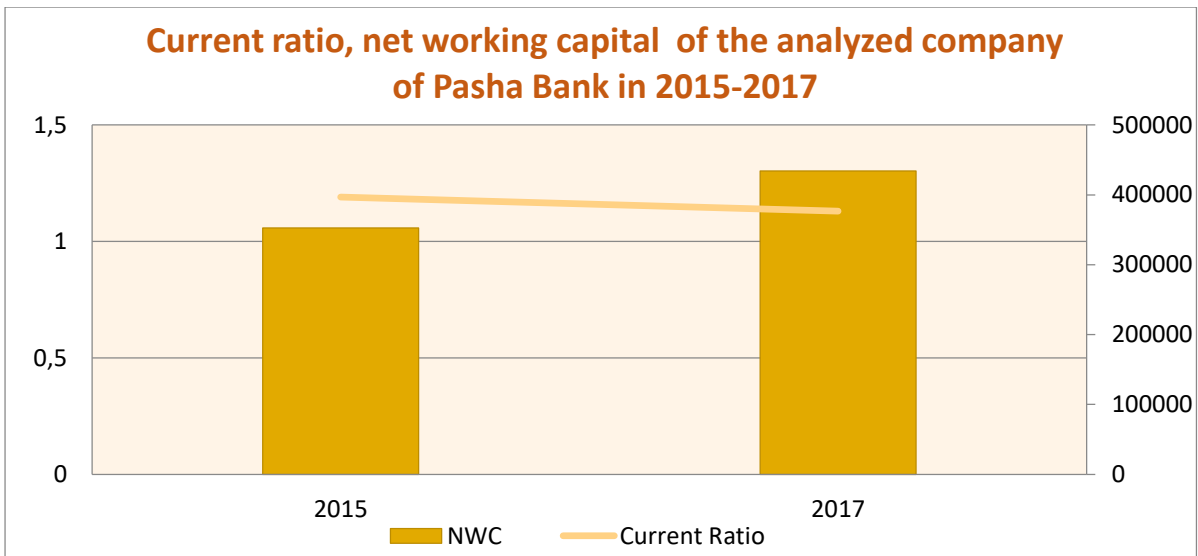
leverage, which is described as the increase in the return on equity due to the usage of debt capital. If it was true in case of the analyzed companies, the highest return on equity should be observed at highest D/E or D/A value. Thus, in this way, the highest profitability of equity capital was observed in 2017 in both companies – more or less 18%, whereas D/E was the highest as well.

This observation can lead to the conclusion, that more likelihood the analyzed companies may have the possibility to use the positive effects of the financial leverage due to high interest payments. Obviously other factors may have impact on companies’ productivity, to list only a few – the effectiveness of the investment projects, the profitability of the operating activity or the economic conditions. But for detailed profitability analysis more data is required.

Last part of this research analysis is liquidity risk. Values of current ratio and net working capital for the analyzed companies are presented on figure 4.

Figure 4.





The values of current ratio of SOCAR and Pasha Bank were under 1.00 in 2015 and net working capital was positive and higher, which means that the liquidity risk was very low and the ability of the companies' to pay all the current liabilities on time was very good sign. Since 2017 the situation of both firms has changed slightly. Though the rate of current ratio has declined, the rate was higher than 1.00 and net working capital was positive as well. Overall, in the analyzed period the liquidity risk was low, hence, companies are able to pay off its short-term debt using assets that can be easily liquidated.

Again, a similar question must be asked, what is the reason for these changes, as it is known that current obligations are the cheapest way to finance. Whether the cause of this reduction in short-term obligations was the issue of low liquidity and the choice was made by the companies, or was it imposed externally? Have they realized the potential risks associated with low liquidity and decided to improve the situation, or have potential creditors assessed companies as very risky and decided to limit their access to short-term financing? Actually, the right answer may be different, as the answer may be different for each company.

Conclusion

Financial statements for analysis are a set of analytical processes that are part of the business analysis. These processes use financial reports to estimate the degree of risk of companies.

The principal aim of the paper presented was to analyze the financial risk of two big Azerbaijan firms, namely SOCAR and Pasha Bank. The analysis presented illustrates the potential to identify a company's financial risk through use of balance sheet. Obviously, this analysis may consider as introduction to a more detailed

analysis, but the main problems and threats can be identified. The resulting conclusion can be used as a basis for financial planning and financial risk forecast.

The quantitative research approach was applied to reveal the results of the research study. Since numerical and secondary data are used, quantitative approach is considered to be an appropriate approach for the study. This includes the process of analyzing the data that has been collected from financial statements of companies. Thus, the purpose of statistics is to summarize and answer questions that were received in the research.

In summary, the years 2015 and 2017 were not fortunate for the economy of the country. Plunging oil prices in the world markets were reflected in macroeconomic indicators in the short-term. That is to say, the falling revenues of the State Oil Company created difficulties in meeting their obligations. Similarly, the banking sector experienced serious issues due to the sharp devaluation. On the whole, our results imply that the level of financial leverage was high, so it can be resulted from high value of debt capital than equity in both companies (2015,2017). It shows the fact that PASHA bank and SOCAR depend more on debt (Long-term loans) rather than equity capital. In contrast, the level of net working capital was high, hence, the liquidity risk was low due to a stronger liquidity condition.

In short, our results suggest that to get a general picture of the company's health, other parts of financial statements and supplementary information to and from the financial position of the company together with a more complex risk assessment method should be used.

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13. <https://www.investopedia.com/terms/l/liquidityratios.asp>

ANNEX 1

State Oil Company of the Azerbaijan Republic
Consolidated statement of financial position
(Amounts presented are in millions of Azerbaijani Manats)

	Note	31 December 2015	31 December 2014 (reclassified*)
Assets			
Current assets			
Cash and cash equivalents	8	4,881	1,492
Restricted cash	9	203	112
Deposits	8	143	39
Available-for-sale investments	10	77	-
Trade and other receivables	11	6,146	4,739
Inventories	12	1,903	1,155
Other current financial assets	14	611	261
Total current assets		13,964	7,798
Non-current assets			
Property, plant and equipment	15	17,236	12,134
Goodwill	38	275	177
Intangible assets other than goodwill	16	716	468
Investments in joint ventures	17	3,171	1,127
Investments in associates	18	2,838	1,280
Deferred tax asset	33	712	514
Other non-current financial assets	14	502	78
Other non-current assets	13	540	491
Total non-current assets		25,990	16,269
Total assets		39,954	24,067
Equity			
Charter capital	27	1,617	1,496
Additional paid-in-capital	27	1,423	963
Retained earnings		6,191	8,348
Other capital reserves		(12)	(18)
Put option on company's shares	35	(1,305)	(179)
Gain on sale of subsidiary share	35	1,234	122
Cumulative translation differences		4,427	(200)
Equity attributable to equity holders of the Group		13,575	10,532
Non-controlling interest		1,073	525
Total equity		14,648	11,057

State Oil Company of the Azerbaijan Republic
Consolidated statement of financial position (continued)
(Amounts presented are in millions of Azerbaijani Manats)


	Note	31 December 2015	31 December 2014 (reclassified*)
Liabilities			
Current liabilities			
Trade and other payables	19	6,253	4,038
Short-term and current portion of long-term borrowings	20	3,085	2,212
Taxes payable	21	532	334
Other provisions for liabilities and charges	23	70	68
Deferred acquisition consideration payable	26	133	76
Other current liabilities	25	174	163
Total current liabilities		10,247	6,891
Non-current liabilities			
Long-term borrowings	20	7,826	3,585
Asset retirement obligations	22	748	440
Other provisions for liabilities and charges	23	142	153
Deferred income	24	79	77
Deferred tax liability	33	1,037	580
Advances received for the sale of shares	34	2,097	625
Put option liabilities	35	2,492	216
Other non-current liabilities	25	638	443
Total non-current liabilities		15,059	6,119
Total liabilities		25,306	13,010
Total liabilities and equity		39,954	24,067

* Certain amounts shown here do not correspond to the 2014 financial statements and reflect reclassifications made as detailed in Note 2.

Approved for issue and signed on behalf of the Group on 30 June 2016.



Mr. Rovnag Abdullayev
President

Mr. Suleyman Gasymov
Vice-President for Economic Affairs

ANNEX 2

State Oil Company of the Azerbaijan Republic

Consolidated financial statements

Consolidated statement of financial position

(Amounts presented are in millions of Azerbaijani Manats)

	Note	31 December 2017	31 December 2016 (reclassified*)
Assets			
Current assets			
Cash and cash equivalents	8	5,217	4,163
Restricted cash	9	265	121
Deposits	8	218	1,039
Available-for-sale investments	10	174	82
Trade and other receivables	11	10,007	8,618
Inventories	12	4,810	4,968
Other current assets	13	1,614	1,564
Total current assets		22,305	20,555
Non-current assets			
Property, plant and equipment	16	25,669	20,116
Goodwill	40	327	342
Intangible assets other than goodwill	17	739	689
Investments in joint ventures	18	5,022	4,555
Investments in associates	19	4,571	4,442
Deferred tax assets	34	905	841
Other non-current financial assets	15	685	578
Other non-current assets	14	1,124	889
Total non-current assets		39,042	32,452
Total assets		61,347	53,007
Equity			
Charter capital	28	3,036	1,802
Additional paid-in capital	28	4,541	2,159
Retained earnings		7,357	6,265
Other capital reserves		(6)	(46)
Put option on company's shares		(1,310)	(1,305)
Gain on sale/purchase of subsidiary share	28	1,181	1,280
Cumulative translation differences		5,806	6,292
Equity attributable to equity holders of the Group		20,605	16,447
Non-controlling interests		1,370	1,257
Total equity		21,975	17,704

* Certain amounts shown here do not correspond to the 2016 financial statements and reflect reclassifications made as detailed in Note 2.

Consolidated statement of financial position (continued)*(Amounts presented are in millions of Azerbaijani Manats)*

	Note	31 December 2017	31 December 2016 (reclassified*)
Liabilities			
Current liabilities			
Trade and other payables	20	12,450	9,692
Short-term and current portion of long-term borrowings	21	5,998	6,717
Taxes payable	22	487	616
Other provisions for liabilities and charges	24	70	45
Deferred acquisition consideration payable	27	147	153
Deferred income	25	41	98
Other current liabilities	26	653	1,052
Total current liabilities		19,846	18,373
Non-current liabilities			
Long-term borrowings	21	9,513	8,210
Asset retirement obligations	23	1,067	968
Other provisions for liabilities and charges	24	94	148
Deferred income	25	63	74
Deferred tax liabilities	34	1,209	1,272
Advances received for the sale of shares	35	4,076	2,897
Put option liabilities	36	2,719	2,832
Other non-current liabilities	26	785	529
Total non-current liabilities		19,526	16,930
Total liabilities		39,372	35,303
Total liabilities and equity		61,347	53,007

* Certain amounts shown here do not correspond to the 2016 financial statements and reflect reclassifications made as detailed in Note 2.

Approved for issue and signed on behalf of the Group on 7 June 2018.



Mr. Rovnag Abdullayev
President

Mr. Suleyman Gasymov
Vice-President for Economic Affairs

The accompanying notes are an integral part of these consolidated financial statements.

ANNEX 3

OJSC PASHA Bank

2015 Consolidated financial statements

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2015

(Figures in tables are in thousands of Azerbaijani manats)

	Notes	31 December 2015	31 December 2014
Assets			
Cash and cash equivalents	6	1,021,306	347,980
Trading securities	7	46,238	28,599
Amounts due from credit institutions	8	137,895	72,691
Investment securities			
- available-for-sale	9	5,696	209,467
- loans and receivables	9	87,903	-
Derivative financial assets	18	324	-
Loans to customers	10	902,150	538,875
Investment property	11	1,668	2,000
Property and equipment	12	15,851	16,244
Goodwill and other intangible assets	13	56,730	4,126
Current income tax assets		287	1,367
Deferred income tax assets	19	1,555	1,013
Prepayment for equity investment		-	41,971
Other assets	14	15,136	8,925
Total assets		2,292,739	1,273,258
Liabilities			
Amounts due to banks and government funds	15	369,693	174,377
Amounts due to customers	16	1,374,113	703,058
Other borrowed funds	17	93,814	55,451
Derivative financial liabilities	18	991	87
Deferred income tax liabilities	19	9,688	-
Provision for guarantees and letters of credit	22	379	2,683
Dividends payable to shareholders	20	-	10,832
Other liabilities	14	11,572	3,064
Total liabilities		1,860,250	949,552
Equity			
Share capital	20	333,000	333,000
Retained earnings/(accumulated deficit)		19,283	(5,929)
Net unrealised (loss)/gain on investment securities available-for-sale		(100)	98
Foreign currency translation reserve		80,244	(3,463)
Total equity attributable to shareholders of the Bank		432,427	323,706
Non-controlling interests		62	-
Total equity		432,489	323,706
Total liabilities and equity		2,292,739	1,273,258

Signed and authorised for release on behalf of the Executive Board of the Bank:

Taleh Kazimov



Chairman of the Executive Board

ANNEX 4

OJSC PASHA Bank

2017 Consolidated financial statements

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2017

(Figures in tables are in thousands of Azerbaijani manats)

	Notes	2017	2016
Assets			
Cash and cash equivalents	5	1,465,771	1,105,769
Trading securities	6	2,224	22,669
Amounts due from credit institutions	7	592,029	728,121
Investment securities			
- available-for-sale	8	405,530	173,329
- loans and receivables	8	40,408	61,220
Derivative financial assets	18	1,665	984
Loans to customers	9	1,350,668	1,107,274
Investment property	10	1,668	1,654
Property and equipment	11	12,808	12,809
Intangible assets	12	48,954	55,067
Current income tax assets		2,154	-
Deferred income tax assets	19	640	1,647
Other assets	13	33,896	19,302
Total assets		3,958,415	3,289,845
Liabilities			
Amounts due to banks and government funds	14	399,973	330,294
Amounts due to customers	15	2,889,961	2,350,687
Other borrowed funds	16	39,105	51,473
Debt securities issued	17	81,765	18,705
Derivative financial liabilities	18	2,058	2,468
Current income tax liabilities		1,136	12,436
Deferred income tax liabilities	19	10,056	8,446
Provision for guarantees and letters of credit	21, 22	3,112	6,959
Other liabilities	13	32,100	21,111
Total liabilities		3,459,266	2,802,579
Equity			
Share capital	20	333,000	333,000
Retained earnings		113,601	83,152
Net unrealised loss on investment securities available-for-sale		(24)	(1)
Foreign currency translation reserve		52,496	71,046
Total equity attributable to shareholders of the Bank		499,073	487,197
Non-controlling interests		76	69
Total equity		499,149	487,266
Total liabilities and equity		3,958,415	3,289,845

Signed and authorised for release on behalf of the Executive Board of the Bank:

Talch Kazimov

Chairman of the Executive Board

Hayala Nagiyeva

Chief Financial Officer

9 March 2018

The accompanying notes on pages 6 to 53 are an integral part of these consolidated financial statements.

1