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MİMAR SİNAN FINE ARTS UNIVERSITY
INSTITUTE OF SCIENCE AND TECHNOLOGY

COMPARISON OF LEASING, CREDIT AND DIRECT PURCHASE FOR CONSTRUCTION COMPANIES

M.Sc. Thesis by
Civil Eng. Konstantin OSTAPCHUK

Division of Structural Engineering

Programme of Construction Project Management

Supervisor: Assoc. Prof. Dr. Selin GÜNDEŞ

JANUARY 2014

T.C.
MİMAR SİNAN GÜZEL SANATLAR ÜNİVERSİTESİ
FEN BİLİMLERİ ENSTİTÜSÜ

COMPARISON OF LEASING, CREDIT AND DIRECT PURCHASE FOR CONSTRUCTION COMPANIES

YÜKSEK LİSANS TEZİ

İnş. Müh. Konstantin OSTAPCHUK

Yapı Mühendisliği Anabilim Dalı

Yapım Proje Yönetimi Programı

Tez Danışmanı: Doç. Dr. Selin GÜNDEŞ

OCAK 2014

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KABUL VE ONAY SAYFASI

Konstantin OSTAPCHUK tarafından hazırlanan "COMPARISON OF LEASING, CREDIT AND DIRECT PURCHASE FOR CONSTRUCTION COMPANIES" adlı bu tezin Yüksek Lisans tezi olarak uygun olduğunu onaylarım.

S. Gündeş

.....

Doç. Dr. Selin Gündeş

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Bu çalışma, jürimiz tarafından Yapım Proje Yönetimi Anabilim Dalında

Yüksek Lisans tezi olarak kabul edilmiştir.

Başkan: : Doç. Dr. Selin Gündeş S. Gündeş

Üye : Prof. Dr. Sema Ergönül

Üye : Doç. Dr. Özlem Eren

Bu tez, Mimar Sinan Güzel Sanatlar Üniversitesi Fen Bilimleri Enstitüsü tez yazım kurallarına uygundur.

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FEN BİLİMLERİ ENSTİTÜSÜ
Ocak 2014

ÖZET

Kazakistan ekonomisinde kısa bir süre önce yaşanan derin kriz, ekonominin bozulmasına ve birçok kişinin işini kaybetmesine sebep olmuştur. Son zamanlarda ise ekonomik göstergeler düzelmeye başlamış, mevcut iş durumunun kalkınması ve gelişmesi için gerekli ön koşullar oluşturulmuştur. Böyle bir ortamda, inşaat şirketleri, bir yandan yatırım risklerine karşı duyarlılıklarını korurken, diğer yandan da basit ve düşük maliyetli ekipman yenileme mekanizmalarına daha fazla ihtiyaç duymaya başlamışlardır.

Bu çalışmada, Kazakistan inşaat firmalarının makine ve ekipman temininde kullandıkları temel mekanizmalar arasından seçim yapabilmelerini kolaylaştırmak amacı ile kredi, leasing ve doğrudan satın alma yöntemleri incelenmiş, dört adet inşaat firması, finansal kiralama şirketleri ve bankalar ile görüşmeler yapılmıştır. Görüşmeler ve literatür taraması sonucunda yöntemlerin herbirinin avantaj ve dezavantajları belirlenmiş, analiz sonuçları bir tabloda sunulmuş ve tartışılmıştır.

Sonuç olarak, inşaat şirketlerinde makine ve ekipman temininde kullanılan kredi, leasing ve doğrudan satınalma mekanizmalarının farklı koşullarda seçimine yönelik bir karşılaştırma modeli ortaya çıkmıştır. Bu karşılaştırmanın, inşaat şirketlerinin makine ve ekipman satın alma süreçlerinde uygun ve fonksiyonel bir şekilde seçim yapmalarına yardımcı olması beklenmektedir.

COMPARISON OF LEASING, CREDIT AND DIRECT PURCHASE FOR CONSTRUCTION COMPANY

(M.Sc. Thesis)

Konstantin OSTAPCHUK

MIMAR SINAN FINE ARTS UNIVERSITY

INSTITUTE OF SCIENCE AND TECHNOLOGY

January 2014

SUMMARY

Kazakhstan's economy experienced a period of deep crisis, and as a result, many people lost their jobs. Currently, the preconditions for the appearance and development of business are created. The major requirements for funding are simplicity and low cost equipment replacement guarantee against investment risks. These are bringing about the use of credit and leasing.

The main objectives of this research are:

- To uncover the advantages and disadvantages of using leasing, loan and direct purchase mechanisms for the provision of construction equipment in Kazakhstan;
- To compare and contrast the three systems in the light of the literature review and interviews with banks, leasing companies and construction enterprises.

A model for the comparison between the three types of construction equipment provision namely credit, leasing and direct purchase is provided. The results of the analysis are then presented in a table and discussed. Model and table of this comparison will help construction companies to choose the most appropriate and functional way to provide equipment.

ACKNOWLEDGEMENT

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January, 2014 Konstantin OSTAPCHUK

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LIST OF ABBREVIATIONS

VAT	: Value-Added Tax
USA	: United State of America
USD	: United State Dollar
LLP	: Limited Liability Partnership
USAID	: The United State Agency for International Development
IFC	: International Finance Corporation
NAICS	: North American Industry Classification System
i.e.	: Latin phrase id est, which means “that is”
et al	: Latin phrase et alia, which means “and others”
e.g.	: Latin exemplī grātiā, which means “for example”
etc.	: Latin et cetera, which means "and so on"
tg.	: Kazakhstan tenge, the currency of Kazakhstan
Inc.	: Incorporated

CHAPTER 1 - INTRODUCTION

1.1. Introduction

Starting from 2007, Kazakhstan's economy experienced a period of deep crisis, and as a result, many people from the defense industry, science, culture and education lost their jobs. The current economic conditions necessitate the appearance and development of enterprises. Therefore, banks, as the most important source of financial resources, are interested to work with new (perspective) businesses. However, the economy is unstable, legislation and the tax system are imperfect, and the inflation is unpredictable.

Figure 1.1 shows the level of inflation rate in Kazakhstan from 2002 to 2012. Inflation rate was stable from 2002 to 2005, than notably increased from 2005 to 2007, in 2007 gradually fell and sharply increased in 2008. In 2008-2009 peak of inflation, it was the financial crisis, in 2009 declined sharply and started from 2009 to 2012 the inflation rate fluctuates but not much. At the present time inflation rate is more or less stable.

Figure 1.1 Inflation rate in Kazakhstan (%) 2002-2012
Source: http://www.tradingeconomics.com/kazakhstan/inflation-cpi

Currently, the preconditions for the appearance and development of business are created. The minimum conditions for the successful operation of companies are as follows (USAID and IFC, 2011):

- A constructive business idea;
- Effective leadership (management);
- A strong financial foundation that cannot be separated from other components of the business.

The easiest and most reliable option is to create a financial base. This means that business owners should raise finance for the company in one form or another. However,

the problem is that some companies have inadequate capital. In practice, this problem is resolved in different ways. However, the essence remains the same. An investment fund, bank or state that have the required financial resources, should agree to start a new (and therefore very risky) business with the entrepreneur. In this case, the motivation for private investors is usually the prospect of high profits. On the other hand, increased employment and social benefits that will accrue from the project are key factors for governmental agencies. However, under present conditions in Kazakhstan, it appears that the only available sources of finance come from the banks and this opportunity depends on their interests to work with beginners in business. Such interest may appear only when, on one hand, the proposed investment project is acceptable in terms of profitability and on the other hand when the bank has adequate financial resources. Furthermore, banks could also benefit in future from the growth of currently small sized companies. In an environment where competition between banks is becoming more acute, this issue becomes more significant.

Also, it should be noted that the distinguishing feature of a new business, in terms of risk assessment is the inability to use traditional methods of credit assessment, based on "historical data" such as the financial statements of prior periods and the information about the client's reputation. For a new business, the basis for evaluating the borrower's ability to fulfill its obligations under the loan (credit) terms depends on the business plan. Accordingly, the methods of credit assessment for the analysis of business plans as the basis for the proposed project lending should be based on an effective business idea. Therefore, the presence of a good business plan is a prerequisite for credit applications. However, in Kazakhstan, the experience of entrepreneurs in planning and market conditions is insufficient and there is a lack of qualified consultants who could help a new entrepreneur in developing his own business plan (USAID and IFC, 2011). These factors impede the normal development of market relations in the economy.

The present levels of scientific and technological progress require the development of new approaches in solving the problems associated with investment. It is necessary to use adequate, unconventional methods of financing for the replacement of production machines compatible with the new generation of advanced sophisticated technology.

However, the major requirements for funding are simplicity and low cost equipment replacement guarantee against investment risks.

These problems bring about the use of credit and leasing. Credit unfortunately is not subject to changes and modifications. Leasing on the other hand is constantly being improved and transformed. Leasing was for the first time mentioned in the first years of independence when the cabinet of ministers established a working group to draft a law "About Leasing" with the order of the president of the Republic of Kazakhstan. A number of ministries and departments, in particular the Ministry of Economy, Ministry of Trade and Industry and Ministry of Justice, worked intensively on the preparation of the draft law of the Republic of Kazakhstan "About Financial Leasing" and "About Foreign Investments". Yet, the insufficient number of credit and leasing transactions in Kazakhstan expresses the lack of modern methods of investment and preparation to enter into a full-fledged market economy that is focused on development of production (USAID and IFC, 2011).

Figure 1.2 shows the current situations of credit and leasing use in Kazakhistan. This figure shows that leasing will save about 10-15% of taxes. With credit the owner of the equipment must pay taxes on income and property.

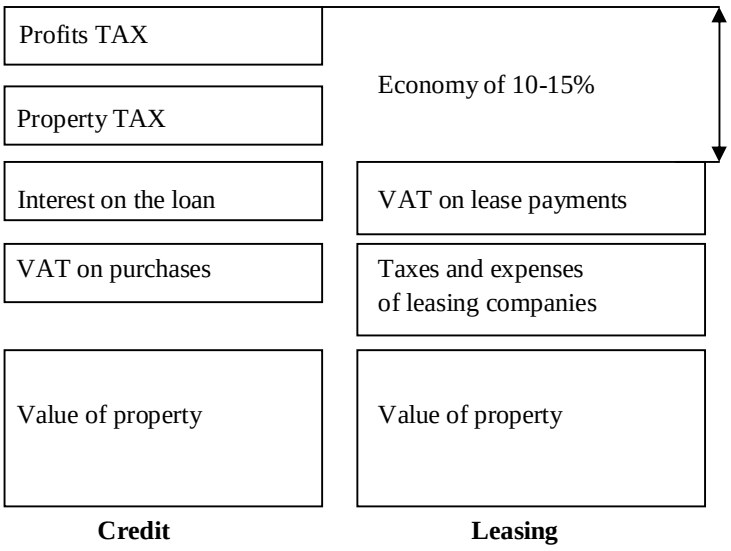


Figure 1.2 Current situation of credit and leasing
Source: Http://mygbelie.myftp.org/?p=982#imgId-8672

1.2. Objectives of research

This research aims to address the theoretical, methodological and practical problems of credit and leasing transactions in Kazakhstan. Understanding the problems of the financial process is important for the effectiveness of the use of credit and leasing in investment and thus for the stimulation of industrial production in the country.

The main objectives of this research are:

- To uncover the advantages and disadvantages of using leasing, loan and direct purchase mechanisms for the provision of construction equipment in Kazakhstan,
- To compare and contrast the three systems in the light of the literature review and interviews with banks, leasing companies and construction enterprises.

1.3. Method

The stages of the thesis are as follows:

- *Examine the principles of leasing, credit and direct purchase in the Republic of Kazakhstan*. The tasks undertaken at this stage include:

  - Literature review. Books, articles, newspapers, magazines, and related laws are examined. The primary source of theoretical background is the works of Kazakh researchers. In addition, regulations, statistical data published in the Republic of Kazakhstan and abroad, current situation, methods used in practice, and the reform of the domestic economy are also examined.

- *In the light of information gathered in the first phase, prepare and conduct interviews with 4 executives from 4 different construction companies*. These are:

1. Procentov V. Executive of LLP "Firm Avtodorservis"

   -The general contractor, managing construction projects, providing materials, equipment, etc.

2. Platonov N. Executive of LLP "Aysu Milioratsiya"

   -Infrastructure construction, construction of embankments, preparing the territory for the beginning of construction, work with the land.

3. Hasanov G. Executive of LLP "DSK Group"

   -Infrastructure construction, drainage pipes, bus stops, installation of road signs.

4. Savinov S. Executive of LLP "ADSTK"

-Working with the lower layers of the foundation, working with asphalt, application of road marking lines on the road surface.

- *Visit banks and leasing companies in order to gather data on leasing, credit and direct purchase applications*. These include the Halyk Bank, Halyk-Leasing, Leasing Group Inc., Astana Motors Leasing and "Astana Finance".
- *Analyze the data in order to compare the three approaches, to find out the problems experienced in implementation and to develop reccommendations.*

In addition, an example of leasing operations in the financial department of a construction company LLP "Firma Avtodorservis" is provided.

1.4. Organization of research

Chapter 1 provides an introduction to the thesis: the problem definition, description of the method and data collection. In chapter 2, a literature review on leasing and credit is presented. The literature review is based on newspapers, books, journals and articles. The theoretical base of leasing, credit, their foundations, classifications, methods of calculation and methods for their use are examined. The literature review undertaken in this chapter provides the basis for the comparative analysis in chapter 4. In Chapter 3, a detailed case study of leasing operations in the leasing department one of the construction companies interviewed for this thesis is presented. The case study covers the basis for leasing operations in Kazakhstan, an example of leasing decision for the company, the problems experienced and their proposed solutions, payment of taxes, lease payments, lease agreement, depreciation, the business plan and insurance of equipment. In chapter 4 the results of the analysis is presented. A comparison between the three types of construction equipment provision namely credit, leasing and direct purchase is undertaken. A practical example of credit, leasing and direct purchase is shown. The results of the analysis are then presented in a table and discussed. Finally, chapter 5 presents the conclusions and contributions of the thesis.

CHAPTER 2 - THE USE OF LEASING, CREDIT AND DIRECT PURCHASE FOR CONSTRUCTION EQUIPMENT

This chapter aims to explain the view of various authors about the use of leasing and credit for construction equipment in order to provide a basis for the comparative analysis presented in chapter 4. The advantages and disadvantages of leasing operations and credit, classifications, description of parties involved, their roles and calculations are presented. The chapter furthermore presents several comparisons of leasing, credit and direct purchase provided in previous works.

2.1. Leasing

Smagulov (1996) argues that leasing is the investment of temporarily idle or borrowed funds, in which the lessor acquires ownership of the contractual property from a particular vendor and provides the property to the lessee in lieu of payment for temporary use with the right to purchase. A lease deal, in turn, is a set of agreements necessary to implement the lease agreement between the lessor, the lessee and the seller (supplier) of the leased asset.

According to Smagulov (1996), the leased asset can be buildings, structures, machinery, equipment, inventory, vehicles, land and any other non-consumable items. Securities and natural resources cannot be leased assets. Haritonov (1998) considers that legislative acts may establish other restrictions on the use of the leased asset such as land. The object of leasing can also be any product of repeated and prolonged use, including labor. Capital goods market is divided into: real estate, personal property, property rights, intellectual potential and innovation. According to a study on the state of financial leasing in the developed countries undertaken by Chekmareva (1993), the main groups of equipment leased can be:

- Transport (airplanes, cars, ships, railroad cars, trucks, etc.)
- Communication equipment (radio stations, satellite, postal equipment, etc.)
- Agricultural equipment (harvesters, seeders, etc.)
- Construction equipment (cranes, concrete mixers, equipment, etc.)

Chekmareva (1994b) states that leasing process is generally carried out in three stages:

At the first stage, a preparatory work for legal agreements (contracts) is carried out. This includes a detailed study of all the conditions and circumstances of each transaction. Then, the application received by the lessor from future lessee, inference about solvency of the lessee, efficiency of the leasing project and the credit agreement concluded by the lessor and the bank are examined.

At the second stage of the leasing process, legal binding of lease deal is carried out through trilateral and bilateral treaties. In this phase, the sale and purchase of equipment, the acceptance of agreement and the contract for maintenance of leased equipment are taken into consideration.

The third stage of the leasing process covers the period of use of the equipment (property). At the same time, accounting and reporting of all lease transactions are carried out, lease payments are made to the lessor, and at the expiration of the lease further use of the equipment (property) is considered.

From Haritonov's "Legislation, №1" (1998), it can be seen that the main document of a leasing deal is the lease agreement which reflects the basic relationship between parties. It is concluded between the lessor and the lessee and states that the equipment (property) is granted for industrial use by the lessee. The lease agreement is valid for a specified period. The act of acceptance is issued by the lessee, and signed by all parties (e.g. the lessor, the lessee and the supplier – manufacturer). Haritonov (1998) suggests that after registration of the act of acceptance, the lessor as an intermediate shall not be liable to the lessee, as the lessee chose the equipment himself.

According to Chekmareva (1993), during the operational phase, the lessee shall intend to use the equipment in accordance with the recommendations and technical instructions of the supplier; to keep it in good working order, to make the required maintenance and repairs at his own expense. All the risks arising from the operation of the equipment and that are associated with the destruction, loss, premature wear, damage or injury, regardless of the damage, are assumed by the lessee (Haritonov, 1998).

According to Anvar (2002), with the urgent need to revitalize the investment activity, the leasing problem becomes especially important for the state. According to Gladkih (1998), this financial instrument facilitates the mobilization of financial resources for

investment activity. It provides the guaranteed use of investment resources for upgrading of equipment.

2.1.1. The origins of leasing

From Smagulov's (1996) "The Leasing", it can be seen that Aristotle in "Rhetoric" noted that "wealth does not lie in ownership, but in the use of things". English author T. Clark (2009) argues that leasing was known long before Aristotle had lived and notes that a few provisions on leasing could be found in the laws of Hammurabi, adopted in 1760 BC. It has also been stated that the Roman Empire was also involved in leasing and these were reflected in the institutions of Justinian. So, the idea of the separation of ownership, property right and benefit from the proprietorship has been known for a long time, and modern leasing confirms that. USAID and IFC (2011), argue that traditionally, leasing is known to be an American invention. Some researchers believe that the starting point for leasing transactions dates back to 1877, when an American company, "Bell Telephone Company" decided to lease phones instead of selling them. The development of leasing was stimulated by the creation of special leasing companies, for which leasing has become not only a means of trade policy, but also a core activity. The first official leasing company "United States Leasing Corporation" was established in 1952 in San - Francisco.

In the early 60's, American entrepreneurs "moved" leasing across the ocean to Europe, where the first leasing company - "Deutsche Leasing GmbH" appeared in 1962 in Dusseldorf. Since 1972, there is a European leasing market. Haritonov (1998) shows that one of the first laws on lease in England was the law of Wales (Statute of Wales) in 1284, which in addition to the traditional land lease enabled the renting of property.

USAID and IFC (2011) suggest the concept of leasing has entered the official financial vocabulary of Kazakhstan in 1989, when leasing was introduced into bank's licenses. Leasing began to be reflected in some regulatory documents governing banking activities and the banks started to assess the feasibility of using leasing transactions in practice. In the first stage of development, most banks had to change their organizational structure by establishing independent leasing units in their investment departments.

However, according to USAID and IFC (2011), the development of leasing at this stage was not satisfactory.

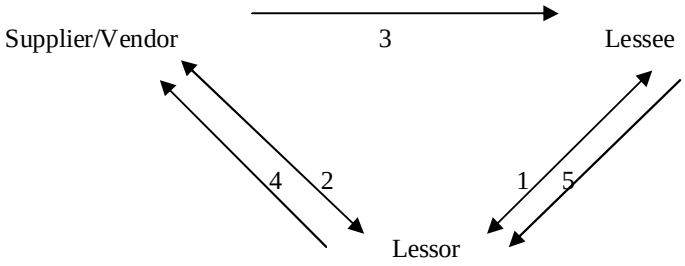
2.1.2. Parties in leasing transactions

Anvar (2002) considers that there are many parties that are involved in and that benefit from leasing operations: the user of the equipment, the investor which is usually a leasing company, the state which may use the leasing for investment in priority sectors of the economy, and finally the bank which as a result of leasing can confidently count on long-term profits.

A leasing deal usually involves the following parties:

- *The Lessor*. The lessor can be any legal entity engaged in a leasing activity, which acquires property through their own or borrowed funds and provides it as leased asset to the lessee for a fee, for a specified period and under certain conditions (with or without passing the right of ownership of the leased asset to the lessee) (Haritonov, 1998). Chekmareva (1993), shows that there are 4 main types of lessors: independent leasing companies, banks and firms connected with the banks, leasing subsidiaries of manufacturers of equipment and other lessors who have sufficient financial resources to invest (insurance companies, pension funds, trust companies, and independent brokers).
- *The Lessee*. The lessee can be a manufacturing and trading enterprise in any legal form that is obliged to take the leased asset for a fee, for a specified period and under certain conditions for temporary possession and use in accordance with the lease agreement (Haritonov, 1998).
- *The seller of the property (the supplier)*. The supplier of the property can be enterprises such as manufacturers of machinery and equipment, commercial firms and companies, supply and sales organizations that, in accordance with the sales and purchase agreement with the lessor, sell produced (purchased) property, leased asset, to the lessor. The supplier must deliver the leased asset to the lessor or the lessee under the terms of the sales and purchase agreement (Haritonov, 1998).

- *Banks (or other financial institutions).* Financial institutions provide funds for the purchase the subject of the agreement (Gladkih, 1998).
- *Insurance companies*. Insurance companies cover all potential risks arising from the leasing deal: the insurance of lessor's property, of loans granted to the lessor by the financial institution against possible risks of non-payment (Gladkih, 1998).



1. Lease contract;
2. Purchase contract;
3. Delivery of the leasing object;
4. Payment for the object;
5. Payment for the installment.

Figure 2.1 The parties of a leasing contract and their roles
Source: www.unicreditleasing.eu

Figure 2.1 shows the relationship between parties in a typical leasing operation. As it can be seen from the figure, first of all the lessee signs a contract with the lessor (leasing company), then the lessor signs a contract with the seller of the equipment. The lessee, after receiving equipment, starts to make lease payments to leasing company while lessor pays the cost of the equipment to seller of equipment.

USAID and IFC (2011) point out that the state, by encouraging leasing activity and using tax benefits, can significantly reduce allocation of public funds for the financing of investment, effectively manage the process of improving the industrial structure in the economy, promote the development of commodity production and services, promote export capability, create new jobs especially in small businesses and address other socio-economic problems.

On the other hand, the advantages of leasing for the lessee can be listed as follows:

- If there is a cost-effective project, a customer is able to obtain equipment and start a particular production without incurring additional costs. This is especially true for beginners of small and medium entreprises (USAID and IFC, 2011).
- The lessee has simplified accounting as leasing company provides services such as: accounting fixed assets, accrual of depreciation, payment of taxes and debt management (Shatalov, 2001).
- Leasing agreement may provide the use of more convenient, flexible repayment schemes (Chekmareva, 1993).

There are also several advantages for the lessor. First, for leasing companies, leasing provides the necessary return on capital employed at lower risk (compared with conventional lending) through effective protection against customer insolvency. Until the final payment, the lessor remains the legal owner of the equipment, so, in case of a failure he can reclaim the equipment and sell it to pay damages. It is because, in the case of bankruptcy of the lessee, it is mandatory to return the equipment to the leasing company (Haritonov, 1998). Second, the lessor transfers the means for production and equipment to the lessee, but not any financial resources for which the control over use is difficult (Gladkih, 1998). Third, the lessor is exempt from payment of income tax (Shatalov, 2001) and partially exempt from customs duties and taxes for assets that are the object of international leasing; in other words that are temporarily imported into the territory of the Republic of Kazakhstan (Haritonov, 1998).

Chekmareva (1993) shows that not only lessees as users of equipment, but manufacturers of equipment are also interested in the development of leasing. For them, leasing expands the sale of equipment. In addition, income from the sale of spare parts for leasing equipment, and opportunities for service and modernization are increased.

According to USAID and IFC (2011) the following groups of lessors are active in Kazakhstan:

- Commercial leasing companies which are the subsidiaries of large banks,
- Commercial leasing companies created by industrial or manufacturing lines,
- Semi-commercial leasing companies created with the participation of state and municipal authorities,

- Leasing companies established by trading companies, and other leasing companies that have no connection either with banks or with industrial or the public instititutions,
- Foreign companies that are suppliers of equipment, vehicles and technologies.

In the law called "About Financial Leasing" (2000), it can be seen that any party in a leasing transaction may be a resident of the Republic of Kazakhstan, a non-resident of the Republic of Kazakhstan, and a business entity formed in partnership with foreign investors, operating in accordance with the laws of the Republic of Kazakhstan.

2.1.3. Classification of leasing and leasing relations

Sagadiev et al. (2000), states that modern leasing market is characterized by the variety of leasing agreement models and regulations that govern them. However, these are not separated from each other by sharp boundaries. The features of different models can be combined in different ways in a single agreement. The variations introduced in the terms of one already known type of leasing may change the whole agreement, leading to the formation of a completely new type of leasing. Therefore, to date, a clear classification of leasing agreements has been not developed. Chekmareva (1993) argues that the main reason for the existence of different classifications of leasing is the inaccuracy of translation of terms in leasing transactions obtained from various countries.

Gladkih (1998), after a comparative analysis of multiple classifications, has grouped the criteria for the classification of leasing according to the following:

- The object of the transaction;
- Term (period) of the transaction;
- The scope and the amount of the transaction;
- The conditions for depreciation;
- The volume of services;
- The market in which operations are performed;
- The ratio of tax and other benefits;
- Character of lease payments;
- Opportunities and conditions for terminating the agreement;
- Method of accounting for the property.

According to Kozhemyakov (1996) currently, developed countries apply different types of leasing; each characterized by its own specific features. The most common are:

• Operating lease;

• Financial lease;

• Sale and lease back leasing;

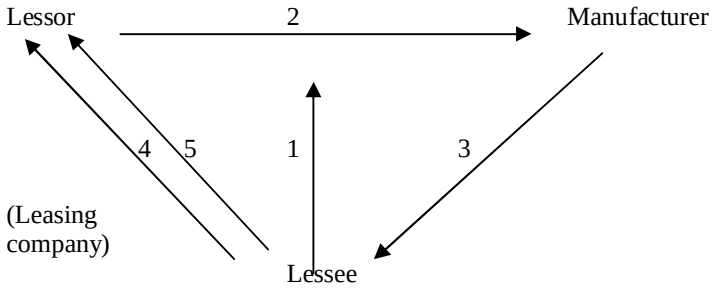
• Share lease (with a third party);

• Direct leasing;

• Sub-lease.

Haritonov (1998) suggests that all existing types of such agreements are variations of two basic forms of leasing - operational and financial. The Law of the Republic of Kazakhstan "On Financial Leasing" regulates four major types of leasing: operational, financial, redemption and sub-lease. The main types of leasing are explained in the following part of this section.

Operational (service) lease. Operational lease is a short term rental arrangement, which is considered as a rent for bookkeeping purposes (NAICS, 1997). Figure 2.2 shows the operational lease process. Haritonov (1998) notes that generally, the term of the agreement is less than the full period of depreciation of leased assets. The contractual rent does not cover the full value of assets, making it necessary to lease it several times.



1- Application for Equipment;
2- Payment for equipment;
3- Equipment;
4- Lease payments;
5- Return of equipment at the end of the contract term.

Figure 2.2 Operational lease process
Source: Kozhemyakov (1996)

Gladkih (1998), points out that the most distinctive feature of operational leasing is the right of the lessee for early termination of the agreement. Such agreements may also include other services such as installation and routine maintenance of the leased equipment. Hence the second, commonly used name of this form of lease is service lease. Thus the cost of services is included in the rent or charged separately.

According to Gladkih (1998), the main objects of operative leasing are quickly outdated equipment (computers, copiers and duplicating machines, various types of office equipment, etc.) and technically complex assets requiring constant service (trucks, cars, aircraft airliners, rail and sea transport).

Haritonov (1998) considers that conditions of the operating lease are more favorable for the lessee. In particular, the possibility of early termination of the lease enables the disposal of obsolete equipment and opens up the possibility of replacing the equipment by a high-tech and competitive one. In addition, in the event of adverse circumstances, the tenant can quickly terminate the leasing agreement, return their equipment to the owner, and reduce the costs associated with liquidation or reorganization of production.

Chekmareva (1993) argues that in case of one-time projects or orders, the operating lease frees the user from the need to purchase and subsequent maintenance of equipment that will no longer be required. The use of various services provided by the lessor or the manufacturer of the equipment can often reduce the cost of ongoing maintenance and the need for specialized personnel.

Gladkih (1998) argues that the main disadvantages of the operating lease include: a) higher rent than in other forms of leasing; b) requirements for making advance payments and prepayment; c) the contractual terms for payment of penalties in case of early termination of the lease; d) other conditions aimed to reduce and partially offset the risk of the owners of the property.

Kozlov (1997) classifies leasing operations into full and incomplete return according to the degree of return of property value. Leasing with full return occurs when the lessor is fully paid the value of the leased property during the term of a contract. Leasing with incomplete return on the other hand occurs when only part of the value of the leased property is paid. Kozlov (1997) states that by the degree of recovery of the object and

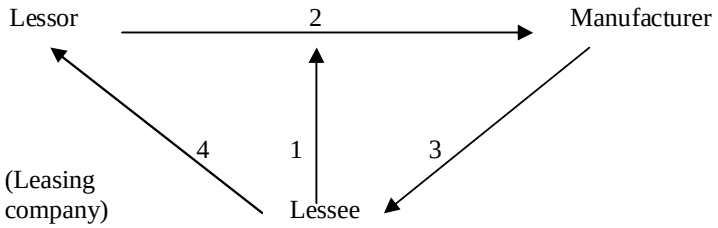
the conditions of its depreciation, which are inextricably linked together, there is so-called operational leasing. The author points out that the first type of operational leasing is the leasing of property with a full return (full payout-lease). The term of the agreement is shorter than the economic life of the property. In the second type of operational leasing, a partial payment of the value of the property (non full payout-lease) is carried out. Here the lessor during the term of this agreement shall reimburse a part of the value of the property, so he has to lease it some time, as a rule, to different users.

Financial lease. According to Haritonov (1998), financial lease is a long-term agreement providing for full depreciation of the leased equipment for payment fees introduced by the lessee. As these agreements do not allow for early termination of the lease, the correct determination of the periodic payment is important: it covers full reimbursement of the cost of acquisition and maintenance of equipment and the required rate of return. In this form of leasing all costs of installation and maintenance of the property are paid, as a rule, by the lessee. Often these agreements provide the lessee the right to purchase the property at the end of the agreement at a reduced or residual value (this value may be purely symbolic, such as $ 1). The objects of financial leasing are property (land, buildings and construction), as well as long-term means of production (Haritonov, 1998). Figure 2.3 exhibits the financial lease process.

Chekmareva (1993) suggests that financial leasing is used by banks and leasing companies. This is the most typical and common form of leasing, which is characterized by medium-term and long-term nature of contracts, full depreciation or most part of the equipment. After expiration of the contract, the lessee can return an object of the leasing to the lessor, extend the agreement or enter into a new one and buy the object of leasing at residual value. The lessee informs in advance of his choice (six months before the expiry of the agreement).

According to Sagadiev et al. (2000), in contrast to the operational leasing, the financial leasing reduces the risk of the lessor. In fact, financial leasing terms are very similar to long-term loan agreements, since financial leasing provides for the full repayment of the cost of equipment; payment of the periodic fee, the cost of equipment and the income of the repayment of debt service. Similarly, Adriasova (1998) argues that financial leasing

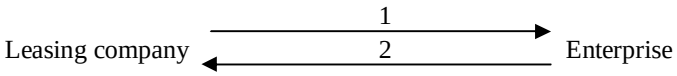
is a long-term credit type. However, in financial leasing the title of the equipment does not pass to the consumer.



1- Application for Equipment;
2- Payment for equipment;
3- Equipment;
4- Lease payments.

Figure 2.3 Financial lease process
Source: Kozhemyakov (1996)

Leaseback. Haritonov (1998) argues that leaseback is a system of agreements under which the owner sells the asset under question to another party, and at the same time he/she leases the asset from the buyer by a long-term lease contract. A buyer is usually a bank, an investment, insurance or a leasing company. As a result of this operation, only the owner of the equipment changes and its user remains the same who- at the end of the operation-has additional funding at his/her disposal. The investor is, in fact, credits the former owner to give property rights as security. Such operations are often conducted in business downturns in order to stabilize the financial situation of enterprises. Figure 2.4 shows the leaseback process.

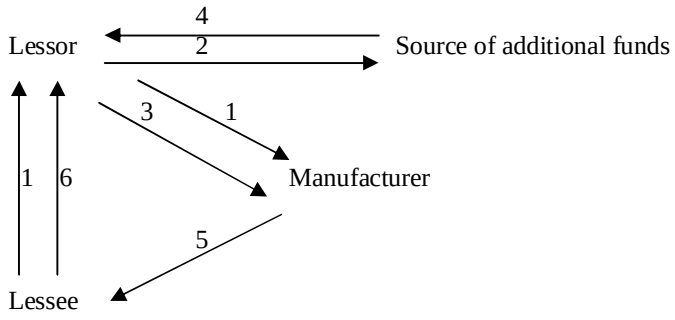


1- The cost of equipment;
2- Lease payments.

Figure 2.4 Sale and lease back process
Source: Kozhemyakov (1996)

Shared leasing. Figure 2.5 exhibits the shared leasing process. Haritonov (1998) states that another kind of financial leasing that includes the participation of a third party; the investor in the transaction (which is usually a bank, insurance or investment company) is called a shared leasing. The leasing company, after signing a contract for a long-term lease of equipment, takes possession of the property by paying part at the expense of

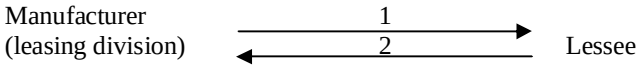
borrowed funds. As security for the loan obtained, the acquired property and future lease payments, are used. In this case, the leasing company takes advantage of the tax shield arising in the process of depreciation of equipment and repayment of debt. The main objects of this form of leasing are equipment for the mining industry.



1- Application for equipment;
2- 80% loan a non-recourse to the lessee;
3- Payment for equipment;
4- Loan payments;
5- Equipment;
6- Lease payments.

Figure 2.5 Shared lease process
Source: Kozhemyakov (1996)

Direct lease. In the direct lease, the lessee enters into an agreement with a leasing company on purchase of the required equipment and the subsequent lease (Haritonov, 1998). Often, the lease agreement may directly be signed with the manufacturer (Figure 2.6). Leaders of the world car market - «Daimler-Chrysler" and BMW are the founders of leading leasing companies through which they sell their products all around the world.

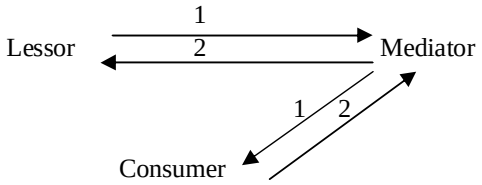


1- Equipment;
2- Lease payments.

Figure 2.6 Direct lease process
Source: Kozhemyakov (1996)

Subleasing. Subleasing is a special kind of leasing that arises from the assignment of rights to lease the leased asset to a third party by a sublease agreement (Haritonov,1998).

In subleasing, the mediator carrying sublease rights takes the leased asset under the lease agreement and sublets the asset to the lessee under the sublease agreement (Figure 2.7).



1- Equipment;
2- Lease payments.

Figure 2.7 Sub-lease process
Source: Kozhemyakov (1996)

According to law "About Financial Leasing" (2000), lease payments to first lessor must be made by the lessee, not the sub-lessee. To transfer lease equipments in subleasing, the first lessee has to take written permission from lessor. It has also been stated that the first lessor has the priority in receiving lease payments. The agreement usually provides that in case of bankruptcy of the third party, the lease payment is received by the head lessor.
The law "About Foreign Investments" (1994) states that international sublease is a variation of the international leasing. A distinctive feature of the international sublease is movement of leased asset through the customs border of the Republic of Kazakhstan only for the duration of the sublease agreement.
Several other classifications for leasing also exist in literature. Chekmareva (1993), depending on the number of parties, classifies leasing deals into bilateral, trilateral and multilateral leasing. While the classical leasing generally involves three parties; namely “seller - lessor - lessee”, the multilateral leasing involves «bank - insurance company - foreign investors - seller - lessor - lessee». In a later study by Chekmareva (1994a), leasing transactions are classified as small, medium, and large scale depending on scope and the amount.
Gladkih (1998) argues that "wet-leasing" occurs when the lessor offers a full range of services to the lessee. The leasing of special equipment with complex technical features involves "wet-leasing" with additional obligations. Typically, it is used either by manufacturers of such equipment, or large wholesale trade organizations. This is one of the most expensive types of leasing. Along with maintenance, repair and insurance, it

may also include the delivery of the equipment and inputs for operation, the training of personnel.

As far as tax or depreciation benefits are concerned, Kozlov (1997) states that there are:

- Dummy-lease, when the deal is speculative and is agreed solely for the purpose of deriving of maximum profit due to tax and depreciation benefits;
- Leasing with compensation occurs when payments are made in the form of the supply of goods (asphalt, paint, etc.), or through the provision of counter services;
- Mixed-payment leasing when combined both above forms of payment.

Group (or equity) lease is a form of financial leasing in which the lessor uses the borrowed funds to purchase lease equipment. The share of loans in the total price of the equipment can be up to 60-80%. In this case, the lessor is a group of shareholders, which represents the trustee of owners. This type of lease is widely used for the rental of large-scale objects such as aircraft, railroad equipment, drilling platforms and rigs, complete equipment companies, etc. Direct financial leasing on the other hand involves a leasing operation carried out independently by one lessor (as opposed to a group leasing, where the assets of a third party are involved), which is not manufacturer or marketer (Smagulov, 1996).

Haritonov (1998) states that under Kazakh law, there are 2 main forms of leasing: domestic and international. Under domestic leasing, lessor, lessee and supplier are residents of the Republic of Kazakhstan. Domestic leasing is governed by the laws of the Republic of Kazakhstan. Under international leasing, lessor or lessee is a resident of the Republic of Kazakhstan regardless of nationality. International lease agreement is governed by the laws of the Republic of Kazakhstan. However, if the lessor is not resident of the Republic of Kazakhstan, it means that the leased asset is owned by a non-resident of the Republic of Kazakhstan and the international lease agreement is governed by the laws of foreign trade activity. Investment in leasing transactions abroad has a number of advantages for the lessor (Gladkih, 1998). In this case, the lessor acts directly in the country of the lessee, which gives access to local financial resources and reduces the risk associated with currency exchange.

Kozlov (1997) suggests these leasing relations can overcome some of the restrictions:

- Tax on transfer of lease payments abroad;
- Legal restrictions on the activities of foreign partners of lessors;
- Difficulties with the registration of the equipment to the foreign entity.

In addition to classifications according to the leasing types, Gladkih (1998) also provides another classification according to the duration of leasing operations. These are long-term leases for which the agreements cover more than three years, medium-term (hiring) for a period of one to three years and finally short-term leasing (rental, renting, or charter) for a period not exceeding one year.

2.1.4. Types of lease payments

Payments for use of leased property by the lessee are made in the form of lease payments (Haritonov, 1998). The amount, the way, the form and frequency of payments are set by the parties in the lease agreement. According to the author, the total amount of lease payments may include:

-The full recoverable amount or the cost of the leased property;

-The cost of the loan that is used for purchasing property under a lease agreement;

-The amount paid for the insurance of the leased property, (if it was insured by the lessor);

-Other costs of the lessor provided by the lease agreement.

Sagadiev et al. (2000), state that various types of lease payments exist depending on the agreement between the parties. Lease payments can be distinguished into two forms depending on the form of payment:

- Cash payments, when the payment is made by cash;
- Compensation payments, when the payments are made by goods or by providing a counter service to the lessor;
- Mixed-payments, include both cash payments and payments by goods and services.

The most common forms of payments used in practice are:

1. Fixed total amount of lease payments agreed by the parties and paid in the order stated in the lease agreement. Usually, a schedule of payments is constituted indicating that the

first lease payment will be paid on the day of receipt, and then in monthly, quarterly, bi-annual or annual intervals (Chekmareva, 1993; Adriasova, 1998).

2. Payment with an advance payment (deposit) suggests that the lessee makes an advance payment to the leasing company or pays the 15-20% of the purchase value of the object of leasing deal, and the remaining 80-85% is either paid after signing the protocol of acceptance (putting into commission), or within 3-5 years on a quarterly basis (Sagadiev et al., 2000).

3. Minimum lease payment is the sum of payments over the lease term that the lessee must pay, plus the amount that should be paid in case the lessee intends to acquire the leasing object after the expiration of the lease agreement. It is assumed that the tenant is entitled to buy the property at a price that should be substantially lower than the market price at the date of the termination of contract (Chekmareva, 1993).

4. Undefined rent is not a fixed amount, but is regulated on some basis such as a percentage of sales, the amount of funds used, market rates of interest on loans, etc. (Smagulov, 1996).

According to Chekmareva (1993), given the financial condition and payment opportunities of the lessee, different ways of lease payments may be established in the agreement. Uniform payments with equal shares, progressive payments with increasing amounts or regressive payments that decrease over time. Progressive payments are used primarily by lessees with an unstable financial situation, as at the initial stage of leasing leasing fees are lower, and then, as the company develops and income increases, the amount of leasing payments increase. Regressive payments on the other hand are used by lessees with a stable financial position. At the initial stage of leasing, the user prefers to pay a large part of its debt to the lessor.

2.1.5. The calculation of lease payments

There are many different methods for calculating lease payments. While some of these are based on simplified procedures, others may be more complex involving quantitative financial analysis techniques, or financial and economic calculations (Kozhemyakov, 1996). According to USAID and IFC (2011), the cost of leasing for the lessee is formed from the regular (annual, quarterly, semi-annual, quarterly, monthly, etc.) rental

payments, the amount of which depends on the length of the economic life of the equipment, on its value, on the lease term, risks and on the frequency of contributed fees. The amount of the lease payments are also affected by the amount of depreciation allowances, residual value, a percentage of the loan, the cost of providing services to the leasing company (the organization of transportation, installation, maintenance of the leasing object, advisory services on taxation, transaction processing, etc.) provided by the lease agreement.

Sagadiev et al. (2000) argues that the terms of the agreement reflect the following relationship in payments: the shorter the term of the lease, the higher the payments. For example, rental of construction equipment in Kazakhstan for a day costs 1.5-2 times more than the daily price in weekly arrangements, and almost 2.5 times more than the daily price in monthly agreements. Than shorter term of the lease equipment, so, the more expensive lease fee.

The quantities of uniform rental rates (Am) are determined by dividing the total cost by the number of lease payments (Chekmareva, 1993):

$$A_M = \frac{B+C+A-D}{T} \quad \textbf{(2.1)}$$

where:
A – amount of insurance fees;
B – the purchase price of the object of the lease;
C – property tax;
D – the residual value of the object at the end of the lease;
T – the number of months of the lease term.

Idrisov (2000) supposes that often rental rates are set not only depending on terms of the lease, but on the intensity of use of the asset under question. For example, in car rentals the rental fee is charged for each day of rental and extra mileage in excess of the norm.

Haritonov (1998), states that rental of equipment is carried out by so-called specialized lease firms. Many of these companies have moved from long-term deals to rental of equipment for days and hours. The minimum rental period is 2 hours. Payment is made at the established rental rates. Their amount varies depending on factors such as the term of the lease, the technical conditions, the level of demand for equipment, etc. The value of rent rates is determined based on the functioning profitability of the lease company.

Methods for calculating the operational leasing depend on an assessment of the residual value of the property, on risks and their distribution between the parties, as well as the peculiarities of the market of goods that are the subject of the lease.

The association of American distributors of construction machinery recommends and uses the following method to calculate the rental rates (Am) (Chekmareva, 1993):

$$A_M = \frac{Bm}{K} + Ap \qquad \textbf{(2.2)}$$

where:
A_M – the amount of monthly rental rate;
B_M – general monthly expenses of the lessor;
K – operating factor (the ratio of the estimated time of renting equipment to the calendar time);
Ap – the amount of accounting profit (i.e., before the deduction of interest on loans, depreciation allowances and tax). On the recommendation of the association, it is set in the amount of 25-33%, to realize calculated profit in the amount of 20-25% in case of unforeseen expenses.

General monthly expenses of the lessor are important, as later the leasing company based on these costs will calculate the amount of the lease payments for the construction company. The general monthly expenses of the lessor (Bm) can be calculated as follows (Chekmareva, 1993):

$$B_M = \frac{C_1 + C_2 + C_3 + C_4 + C_5 + C_6}{12} \qquad \textbf{(2.3)}$$

where:
C_1 – the annual amount of depreciation;
C_2 – insurance costs;
C_3 – maintenance charges;
C_4 – interest on loans for the purchase of the leased equipment;
C_5 – general administrative expenses of the company - lessor;
C_6 – burden costs.

Annual amount of depreciation is very important, as it is added to the the amount of general monthly expenses of the lessor that is added to the amount of monthly rental rate. Chekmareva (1993) shows that the annual amount of depreciation (C_1) can be calculated as follows:

$$C_1 = \frac{P_1 - P_2}{T} \qquad \textbf{(2.4)}$$

where:
P_1 – the price of new equipment, including transportation costs to the tenant, unloading, installation, inspection and consultation;
P_2 – the residual amount at which the equipment is sold at the end of life;
T – economically optimal lifetime of equipment (depreciation period) in years.

According to Chekmarev (1993), these formulas cannot be considered as universal. Each particular transaction requires an individual approach.

Chekmareva (1993) states that the transaction price is determined in the contract, and includes the amount of rent and the order of payment. According to the author, the first component of the lease payment is a charge for the use of the object of leasing and is calculated by deducting depreciation allowances and interest from the value of the leased property (interest on a bank loan and payment for the additional bank services). The amount of depreciation allowances depends on the initial value of the property, the duration of its life, the degree of wear at the moment of transfer and on the depreciation rates established for this type of equipment. Chekmareva (1993), furthermore states that the second component of the lease payment, which is determined as a percentage of the initial value of the property, must be equal to the interest rate on long-term loans granted to the same borrower for the same term as the term of the lease. The contract should specify the frequency of payment - monthly, quarterly, semi-annually, etc.

2.1.6. Depreciation

One of the main issues in leasing transactions is the depreciation of leased equipment (Kozlov, 1997). Smagulov (1996) defines amortization as the gradual return of fixed assets cost, including cost of equipment, which is realized by paying off debts in regular amortization charges. These payments form a depreciation fund. The fund, in turn, is used to restore the equity capital.

According to Gladkih (1998), all depreciable property is divided into four major categories:

1) Buildings and constructions and their parts (the depreciation rate, 20 years);

2) Passenger and light commercial vehicles, office equipment and furniture, computer equipment, information systems and data processing systems (4 years);

3) Technology, energy, transportation and other equipment, and tangible assets that are not included in the second group (6 years and 8 months);

4) Intangible assets, depreciation of intangible assets will be accruing in equal parts over the period of their existence, and if this period cannot be determined - for 10 years.

In small businesses, depreciation rates are determined according to the following scheme: in the first group - 6%, in the second - 30%, in the third category - 18% (Gladkih, 1998).

Kozhemyakov (1996) states that experience to date shows that the use of depreciation benefits in leasing of equipment is economically beneficial for all participants in leasing deals. Depreciation is decreasing equipment cost in result of its usage or normal wear and tear. Accelerated depreciation allows the company to deduct equipment cost quicker than normal amortization. Accelerated tax depreciation enable exemption from tax part of equipment under the preposition of wear of equipment before actual wear. With the introduction of accelerated depreciation, companies are obliged to use a uniform method for its calculation (Kozlov, 1997). In Kazakhstan, high-tech industries and efficient machinery and equipment, for which the mechanism of accelerated depreciation applies, are listed by the Department of Finance.

According to the law "About Financial Leasing" (2000), in the event of cessation of activity of a company before the expiry of one year from the start of its operation, the additional amount of accumulated depreciation have to be recovered due to increase balance sheet profit of company. Depreciation shall accrue on the equipment after it is credited in the balance sheet of the company (Kozlov,1997).

Chekmareva (1993) states that total amount of lease payments can be calculated by bringing together the value of depreciation deductions of equipment, payment for use loan resources, amount of commission for leasing company, payments for additional services lessor for construction company and of course value added tax introduced in the budget of the lessor.

1). The total amount of lease payments (L_{tp}) under a lease agreement will be (Chekmareva,1993):

$$L_{tp} = D + P_c + P_{com} + P_s + VAT_p \quad \textbf{(2.5)}$$

where:
D– value of depreciation deductions
P_c- payment for use loan resources;
P_{com}- amount of commission;
P_s- payments for additional services lessor;
VAT_p- value added tax introduced in the budget of the lessor.

2). Chekmareva (1993) shows the amount of the leasing fee is calculated and expressed according to the frequency of payments determined by the lease agreement. The formulas are as follows:

- If the contributions are paid annually (L_c):

$$L_c = L_{tp} \div T \quad \textbf{(2.6)}$$

- If the contributions are paid quarterly (L_c):

$$L_c = L_{tp} \div T \div 4 \quad \textbf{(2.7)}$$

- If the contributions are paid monthly (L_c):

$$L_c = L_{tp} \div T \div 12 \quad \textbf{(2.8)}$$

where:
L_{tp}- total amount of lease payments;
T- one year.

3). The calculation of amortization of leased equipment is shown in formula 2,9. Chekmareva (1994b) depicts that depreciation on leased equipment can be accrued by the normal method of depending on the cost of the equipment, its life and set depreciation rate and by accelerated depreciation method in which the annual rate of depreciation allowances for a full recovery is increased, but not more than twice. In addition, small businesses through accelerated method of depreciation in the first year of exploitation of machines and equipment can deduct up to 20% of the depreciation deductions from the original cost of the equipment, whose service life of over 3 years. Depreciation procedure and the use of accelerated depreciation of the active part of fixed assets are specified in the regulations "calculation procedure of depreciation allowances on fixed assets".

The amount of payable depreciation allowances to the lessor (D) are calculated as follows (Chekmareva, 1993):

$$D = \frac{B_v \times N_d \times T}{100} \quad \textbf{(2.9)}$$

where:
B_v — the balance value of the equipment;
N_d— rate of depreciation allowances for a full recovery;
T — the duration of the lease agreement.

4). The payment for use credit resources (P_c) is calculated as follows (Chekmareva, 1993):

$$P_c = \frac{V_c \times R_c}{100} \quad \textbf{(2.10)}$$

where:
V_c — the value of credit resources attracted for leasing transaction;
R_c — rate for use of credit resources.

Chekmareva (1993) shows the amount of credit (V_c) is determined by the formula:

$$V_c = \sum^{T} \left(\frac{C_b + C_e}{2} \right) \quad \textbf{(2.11)}$$

where:
C_b – cost of equipment at the beginning of the year;
C_e - cost of equipment at the end of the year;
T – number of years, for which the lease agreement is.

5). Commission rate (P_{com}) is determined by the formula (Chekmareva, 1993):

$$P_{com} = \frac{V_c \times R_{com}}{100} \quad \textbf{(2.12)}$$

where:
V_c — the value of credit resources attracted for leasing transaction;
R_{com} – rate of commission.

6). According to Chekmareva (1993), calculation of payments for additional services provided by the lessor (P_s) is carried out by the formula:

$$P_s = E_t + E_s + E_a + E_o \quad \textbf{(2.13)}$$

where:
E_t – travel expenses of the employees of the lessor;
E_s - the costs of services (legal advice, information on the operation of equipment, etc.);

E_a – advertising costs;
E_o – other expenses of the leasing company.

7). The calculation of the amount of value added tax introduced to the budget by the lessor (VAT_p) can be expressed by the formula:

$$VAT_p = \frac{B \times 20}{100} \quad \textbf{(2.14)}$$

where:
B – Taxable revenue from leasing deal;

"Tax Code" states that the amount of revenue derived from the leasing of property and subject to VAT (B) is calculated as follows:

$$B = P_c + P_{com} + P_s \quad \textbf{(2.15)}$$

where:
P_c- Payment for use loan resources
P_{com}- amount of commission;
P_s- payments received by the lessor for additional services.

As it can be seen from the formulas given above, various forms exist for the calculation of lease payments. However, in each case, the calculation of the lease payments will depend on the agreement, the form of leasing and the type of leasing payments selected by lessor and lessee (Chekmareva, 1994).

2.1.7. Cash flow plan

Chekmareva (1993) states that cash flow plan is crucial for enterprises which lease eqipments. Thus, it is also crucial to follow financial balance of the construction company while managing lease payments. How the cash flow profile of the lessee is affected from leasing is shown in Chapter 3 of this thesis.

According to Kozlov (1997), cash flow plan contains two sections: "cash flow" of the investment activity and "cash flow" of financing activity from which the size, timing of investment and the form of financing can be determined. Kozlov (1997) suggests that "cash flow" amount of each of the sections of the cash flow plan is balance of liquid assets for the respective period. The cash balance at the end of the billing period will be equal to the sum of cash balance of the previous period with the remainder of the funds

of the current period. The date of recoupment of the project will be a day when the sum of "cash flow" of productive activity will be equal to the sum of cost of the investment.

Chekmareva (1993) supposes that the aim of financing is to ensure a positive liquid position of funds for all periods of time from the beginning to the end of the project implementation. The analysis of effectiveness of the investment project consists are follows: the total sum of "cash flow" of productive activity and other income (e.g., sale of assets, investments in other companies); the value of the cost of investment.

2.2. Credit

According to Jukova (1995) credit or credit relationship is social relations that arise between the subjects of economic relations on the movement of value. Kiselev (1995) wrote “According to the definition of John Mill, a credit is a permission given to a person to use the capital of another person." Several other definitions of the loan include (Jukova, 1995):

• relationship between the lender and the borrower;
• return movement of the cost;
• movement of the means of payment for early repayment;
• movement of lending value;
• movement of interest bearing capital capital;
• allocation and implementation of early repayment resources;
• provision of real money in return for receivable money.

Stoyanova (2000) argues that credit process is a unity of interrelated stages: planning, lending, usage and loan repayment. Credit mechanism is a set of organizational and technical actions which provide and return bank loans including object selection, methods of credit, grant of loan, use of loan accounts and loan repayment. Failure to comply with loan repayment terms may enforce penalties.

Kiselev (1995) suggests that lending to construction companies is carried out having collateral which may be already constructed buildings, owned by developer, right to own land, stocks and other assets of a construction company. Construction companies are lent for up to 10 years.

2.2.1. The origins of credit

Kolesnikova and Kroliveckoy (1996) consider that the basic concepts of credit have been formulated by the English economist John Law. In his view, the credit is in a position independent from the production process and it has a crucial role in economic development. According to Law, credit is able to set in motion all the unused production capacity of the country and to create wealth and capital. He considered banks not as dealers but as producers of capital. The idea that the organization of issuing banks which may activate all the productive forces of society and enrich the country belongs to Law. Credit relationships have been widely developed in the XIX-XX centuries. Followers and theorists of credit at the beginning of XX century were Western economists J. Schumpeter, A. Hahn, J. M. Keynes and R. Hawtrey.

Stoyanova (2000) argues that the crisis of 1929-1933 discredited the credit theory and showed its complete failure. However, the "rational kernel" of this theory has been used by Keynes and his followers after the crisis of 1929-1933 and the Second World War. In general, on the basis of the credit theory, Keynes and his followers justified the principles of credit management of the economy in which credit determines economic development. Therefore, in order to stimulate the production and the consumer market it is necessary to promote greater investment by reducing credit interest that will ultimately increase the production and consumer demand and reduce unemployment.

Jukova (1997) shows the credit theory was further developed in the theory of monetarism which representatives were M.Friedman, R.Ruza, A.Burns, J.Rueff and A.Veit. Milton Friedman’s concept of monetarism calls for special attention. According to the concept the basic tools of economic regulation are the changes in the money supply and interest rates which make it possible to alternate credit expansion. The establishment of the average annual rate of growth of the money stock combined with a certain level of interest rates may affect the dynamics of production and prices.

2.2.2. Credit system

Credit system is an aggregate of various credit and financial institutions operating in the credit market and exercising accumulation and mobilization of monetary credit (Jukova, 1995). The main sources of credit used in Kazakhstan are specialized credit institutions

and banks. They differ from each other by parties involved, the object of loans, the dynamics, the amount of interest and scope of operation.

Commercial credit provided by one enterprise to another as a sale of goods on credit. The main purpose of the commercial credit is to speed up the process of the sale of goods. Interest on a credit provided by a credit institution is usually lower than that of a bank credit (Stoyanova, 2000). *Bank credit* on the other hand, is provided by banks and other financial institutions, in the form of loans. It has wider scope of implementation. The dynamics of the banking and specialized institutional credits are different. For example, the volume of credit provided by credit institutions depends on the growth of production and trade, whereas the demand for bank credit is generally determined by the state of debts in the various sectors of economy.

2.2.3. Classification of bank credit

Construction companies prefer to use bank credit for the purchase of equipment and for the payment of wages. A consumer credit is required when acquiring furniture, computers, construction machinery and other necessary equipment. Construction companies also use mortgage loan mainly for the acquisition of land for construction. Some construction companies use international credit when they need to take out a loan in a foreign bank for purchase of equipment in another country. Construction companies generally take long-term credits from 3 to 10 years.

There are several forms of bank credit. *Consumer credit* is usually provided by trading companies, banks and specialized financial institutions so that the individuals purchase goods and services with payment by installments (Kiselev, 1995). Jukova (1997) states that *mortgage credit* is granted for the purchase of housing or land. Mortgage credit is provided by banks and specialized credit and financial institutions. The highest level of mortgage credit is used in the USA, Canada and England.

According to Kiselev (1995) *public credit* is divided into state credit and government debt. In the first case, the state credit institutions (banks and other financial institutions) provide credit for various sectors of economy. In the second case, the government borrows money from banks and other financial institutions in the capital markets to finance the budget gap and governmental debt and companies buy public bonds.

Jukova (1997) considers that in market conditions the main form of credit is a bank credit, ie. credit granted by commercial banks of various types and kinds. The subjects of the credit relationships in bank lending are companies and organizations, population, government and the banks themselves. Lenders are persons (legal or individual) who have provided their available funds to the borrower for a specified period of time.

In credit applications, the borrower is a party of credit relationships that receives funds for the use and requires them to return on time (Stoyanova, 2000). As for the bank credits, two parties in credit transactions are the lender and the borrower. This is due to the fact that banks are working mostly on borrowed funds and, therefore, the public and the state as the owners of deposits act as borrowers. Banks act as lenders redistributing the concentrated resources in favor of those who need them. The same thing happens with the other side of credit transactions, ie. the population or the state; they act as lenders by investing their savings in banks.

Jukova (1995) states that trade banks provide their customers with a variety of types of loans that can be classified according to various criteria. First classification is done with respect to the main groups of customers: credit to the population and public authorities.

Credit is distinguished into the following groups according to purpose (Jukova ,1995):

- consumer credit;
- industrial credit;
- trade credit;
- agricultural credit;
- investment credit;
- budget credit.

Jukova (1997) argues that depending on the scope of operation, bank loans provided to enterprises can be of two types: loans involved in the expanded production of capital funds and loans involved in the organization as working capital. The latter, in turn, are subdivided into loans directed to production and loans that are servicing the sphere of circulation.

Jukova (1995) suggests that according to the terms of use loans can be term and non-term. Loans are divided into short-term (1 year), medium-term (1 to 3 years) and long-

term (over 3 years). According to Jukova (1995) typically, loans forming circulating funds are short-term and loans participating in the expanded production of capital assets are related to medium- and long-term loans.

Stoyanova (2000) states that loans are distinguished by size: large, medium and small. Loan security is distinguished into poor (unsecured loan) loans and secured loans which, in turn, are divided into mortgage, guaranteed and insured (Stoyanova, 2000).

Jukova (1995) furthermore groups loans according to their issue method: compensating and payment loans. In the first case, the credit goes to the account of the borrower to recover the borrower's money invested in inventory holdings. In the second case, the bank loan is sent directly to the payment of settlement and financial documents are presented to the borrower for payment relating to credit-financed activities.

According To Kiselev (1995) the main factors that modern commercial banks take into account when setting loan charges are as follows:

-the base rate of interest on loans provided by commercial banks;

-the average interest rate on interbank loan, ie. on the resources bought from other commercial banks for their own active operations;

-the average interest rate paid by the bank to its customers for deposit accounts of various types;

-the structure of credit resources of a bank (the higher the proportion of involved funds, the more expensive a loan should be);

-the credit demand (less the demand, the cheaper the loan);

-the credit period and the type of credit but rather the degree of risk for the bank depending on the security.

Recoverability is the feature that distinguishes loan as an economic category from other economic categories of commodity-money relations (Kolesnikova and Kroliveckoy, 1996). Loan cannot exist without recoverability. Recoverability is an integral feature of the loan.

Kolesnikova and Kroliveckoy (1996) consider that credit should be given only to those who are able to do repayment in time and therefore, lending differentiation should be based on the credit status which means the financial condition of the company giving

confidence in the ability and willingness of the borrower to repay the loan at an agreed contract period.

The principle of loan *security* means that the loan may be granted under certain types of collateral (Stoyanova, 2000). Principle of *payment of interest* for the loan on the other hand means that every borrowing company must pay the bank a certain amount for the temporary use of its funds. The implementation of this principle is put into practice through the mechanism of bank interest. Bank interest rate is a kind of "cost" of a loan. Payment of loan interest is intended to provide a stimulating effect on the commercial enterprises cost accounting encouraging them to increase their own resources and the prudent use of the attracted funds.

Kiselev (1995) suggests that the combined practical application of all the principles of bank lending helps to meet both national interests and the interests of both subjects of credit transaction i.e. the bank and the borrower.

2.3. Characteristics of leasing, credit and direct purchase for the purchase of equipment

It is difficult to find a comparison of leasing, credit and direct purchase in related literature. However, there are many different comparisons (for buying car, computer, apartment) of leasing and direct purchase undertaken by different authors from all over the world within 1998-2000. All comparisons found in literature review are mostly made by leasing companies to advertise leasing and by banks to advertise commercial loans. Nevertheless, it is important to reveal the real benefits, advantages and disadvantages of different forms of acquisition of property. Furthermore, the comparisons are made by foreign authors from various countries and there is no any complete new comparison of leasing, credit and direct purchase for Kazakhstan. In Kazakhstan, leasing and credit were put into practice later than Russia and Ukraine, these countries have different financial situations and level of development.

Earlier comparisons made by other authors, were made for different types of goods, but none for construction equipment. Only 3-5 factors were used for comparison, which, of course, is not enough for a full view of advantages and disadvantages between these three ways of financing.

Prior to the acquisition of any equipment, a construction company should determine the type of purchase and financing and evaluate each option taking into account the advantages and disadvantages, benefits, convenience and according to company's interests. Anvar (2002) states that once an organization decides to purchase machinery and equipment, the management then has to take a decision on the purchase type. The organization has three options: to directly purchase equipment and machinery using own resources, to purchase the necessary equipment using a loan from a financial institution or to use the leasing mechanism.

Sagadiev et al. (2000) shows that in purchasing equipment using own resources is the simplest method. In this case, the buyer pays directly the seller of the equipment. Term of the deal implementation is 1-3 days, but in practice it depends on the availability of equipment (seller) and financial resources (buyer).

According to Adriasova (1998) if the buyer purchases the equipment with the use of a loan, the situation is more complicated. Firstly, the bank requires that the buyer prepares a set of documents; secondly, the bank will dispense the cash only if the firm provides a security (up to 200% of the requested loan); thirdly, if the bank takes a positive decision on lending, the time between the date of application to the bank and the date of issue of money may be 1 - 3 months.

According to Sagadiev et al. (2000) in leasing the method of the deal implementation takes 3-14 days, it is slightly longer than in the direct purchase and much faster than in the loan. Sagadiev et al. (2000) furthermore argues that, leasing in addition solves a series of tasks, which in the other two methods take a fair amount of time such as insurance and registration.

It is possible to distinguish two important factors in the comparison of the three mechanisms: costs and tax optimization. Shatalov (2001) considers that in purchasing, expenses include the full cost of the property and the property tax. Furthermore, if the purchase of the equipment is on the net profit of company, it means that previously paid income tax is also raises the price of the deal.

In Adriasova's (1998) "Business and banks", it has been emphasized that the cost of credit for the purchase of property include payments of principal and interest on the loan

and the property tax. The leasing costs consists a series of lease payments payable over several years and the payment of redemption value upon expiry of the lease agreement.

Adriasova (1998) suggests that the current legislation of Kazakhstan provides for the use of a different tax regime in leasing that allows savings to be made from tax payments. Therefore, it is necessary to take into account the savings on taxes in the calculation of costs related to the leasing deal.

In “Economy and Law” by Shatalov (2001) it has been stated that in purchasing equipment at own expense, the tax deductible expenses are depreciation allowances and property tax. In this case, the Tax Code of the Republic of Kazakhstan does not provide for incentives for companies acquiring fixed assets. Depreciation is charged under the general conditions.

The law "On Financial Leasing" (2000) indicates that when acquiring property ownership with the use of loans, a standard procedure for the accrual of depreciation applies.

Chekmareva (1994a) argues that the maximum coefficient of accelerated depreciation in the operation of the equipment in a hard labor conditions is not higher than 2. Thus, in most cases, the possibility of accelerated depreciation of personal property is not provided by the laws. In this case, according to Kozlov (1997), the Tax Code of the Republic of Kazakhstan does not provide for incentives for companies acquiring fixed assets. Depreciation, as in the case of direct purchase, is provided under general conditions. Interest on the loan is also included in expenses under general conditions.

In purchasing equipment with leasing, parties have the right to use accelerated depreciation method with a factor of no more than 3 for taxation. Anvar (2002) argued that the use of the accelerated depreciation mechanism allows the lessee to substantially reduce payments for income tax in the first years after the acquisition of fixed assets. Also, due to the faster depreciation of machinery or equipment, the amount of the property tax to be paid by lessor is reduced (when the property is on the balance sheet), which leads to a decrease in cost of the lessee.

USAID and IFC (2011) state that the acquisition of equipment using leasing allows the organization or company to plan their long-term costs, and optimize tax payments so

that the total costs of the transaction are comparable to the costs for direct purchase and are significantly less than the purchase on credit. Gladkih (1998) furthermore argues that with leasing, entrepreneur can start a business, having a part (about one third) of the funds required to acquire facilities and equipment (property).

2.3.1. Previous studies on the comparison of leasing, credit or direct purchase

The main purpose of this thesis is to undertake a comparison between the three main mechanisms used for the provision of construction equipment. Therefore, this section exhibits the main conclusions of previous works on the comparison of leasing, credit and direct purchase mechanisms for the provision of machinery and equipment.

Comparison by Kapelyan and Levkovich (1999):

In the book “Basis of commercial and of financial calculations”, it has been stated that in case of insufficient money for buying equipment one can use a loan or leasing. Both variants look very similar: after making initial payment one can get the desired equipment. Of course, it is also necessary to make certain monthly payments for debt. In the case of leasing, one can use another’s equipment for a certain period of. The equipment becomes the property of the borrower only after full payment of all fees laid.

Kapelyan and Levkovich (1999) suggest that leasing companies in most cases operate on the principle of "all inclusive" addressing issues of self-registration, insurance and inspection of equipment. If the buyer purchasing the equipment on credit pays for these services one-time fee then these costs are included in the total amount of debt and they also accrue interest. It is almost impossible to refuse that kind of service. Some leasing subsidiary structures of banks can make an exception allowing the customer to pay a one-time insurance.

Kapelyan and Levkovich (1999) argue that one can buy equipment by installment at an average of 11,5-14,5% per annum and in leasing under 13-16% in USD. A key advantage of leasing in comparison with loan, perhaps, is that it is possible to postpone the repayment of part of a debt to the end of the agreement time, but it is not free of charge. Kapelyan and Levkovich (1999) consider that one of the most important and attractive aspects of leasing is branding. Customer has an opportunity (once every three years on average) to change new equipment to another thus demonstrating his/her

financial capabilities. However, this option is not for those who want to save money. The mechanism of such an option is quite simple: the borrower does not redeem the leased equipment but sell it. Unpaid balance of the debt is extinguished due to the proceeds and the remaining difference (unless it exists) is credited for new equipment as the first installment.

Kapelyan and Levkovich (1999) argue that in one case, one can sell it only to a dealer. In another case, the leasing company does not sell equipment but can have it in its property evaluating its market value, deducting the remaining debt and crediting the difference in advance for new equipment purchase. In case a company owns equipment it is recognized as a long-term asset on the company's balance sheet. In case a company buys equipment on credit the cost of the equipment is recorded as liabilities and interests on the credit are recorded in financial expenses.

Comparison of leasing, purchase and credit by Marinin (2000):

Rental of equipment. Currently, manufacturers and suppliers of equipment offer it by renting for a specified period of time: for example renting for 6-10 months. If the tenant is satisfied with the performance of the equipment, then he/she must buy it. The cost of renting the equipment is directly related to its cost, the average payback period, monthly income and demand it should be noted that the price of leased inexpensive equipment (with a payback period of approximately 6 months) will be equal to 1/8-1/10 of its cost. Giving virtually half of their earnings the tenants still will not be the owners of the equipment until they purchase it, ie. pay the full cost. Rental of equipment is beneficial only if the tenant is not sure how the business will go or if he needs the equipment for a short period of time.

Leasing. According to Marinin (2000) leasing is a kind of rent contract where the lessee is the receiver of the services or the assets under the lease contract and the lessor is the owner of the assets. The lessor agrees to acquire the ownership of a property bought from a specific manufacturer or seller and to give the lessee the property for temporary possession and use for business purposes for a certain amount of payment. Purchase in this case is financed by a credit institution which the entrepreneur makes payments

afterwards. In this way, as a rule, expensive equipment is purchased in large quantities, and for a beginner it is not standard solution.

Purchasing. Marinin (2000) argues that most of the market newcomers which are confident in the success of new business start their enterprise purchasing the required equipment. Only after six months after the equipment started the operation, it begins to make a profit. Moreover it is not necessary to worry about the equipment downtime since the entrepreneur is free of rental charges or debts.

The lessee is entitled to pay all lease payments; thus the tax base for income tax reduces. Kazakhstani legislation provides a mechanism of accelerated depreciation with up to 3 indexes which allow reductions in property tax.

VAT is charged in different ways for credit and leasing. The credit amount does not include VAT. However, this tax is paid when purchasing equipment on credit. In the case of a finance lease all the lease payments initially include VAT. Leasing companies impose fewer requirements to their customers. That is why it is easier and faster to take a property on lease than a bank loan. If it is necessary to get the funds as quickly as possible the best option is to take advantage of leasing.

Marinin (2000) argues that one of the advantages of leasing is the flexible payment schedule. Arranging a credit banks put strict requirements on its maturity not taking into account the dependence of the lender on the factors that affect the use of equipment. However, leasing company customer is allowed to choose a convenient payment schedule considering the pecularities of the business.

Marinin (2000) argues that a lot of documents are required for collateral guarantees in arranging a credit whereas less documents are needed for leasing. This is due to the fact that throughout the lease period, the leasing company is the sole owner of the leased object and in the event of lessee's breach of contract, the leased item returns to the leasing company. That means that the object of leasing is the guarantor of the deal.

Other differences between leasing and loan are (Marinin, 2000):

- As far as the time for decisions are concerned, Marinin (2000) states that leasing transaction consideration varies from 3 to 5 days in a leasing company, while the period of loan consideration by a bank can take several weeks;

- The cost of the loan is usually lower than the cost of leasing, as leasing companies use the same bank loans and carry out transactions with their customers taking into account their own margin;
- Loan arrangement procedure does not require mandatory insurance of the purchased object;
- In order to reduce the cost of credit it is possible to make the early repayment of the principal while the lease payments must be paid in full on the basis of a fixed schedule of lease payments.

Comparison of leasing and credit mechanism by Sheremet and Sayfulin (1999):

In "Methods of financial analysis", it has been stated that the main question that arises from the buyer is what the initial payment for the product is and what the costs of banking operation are. In leasing, the initial payment is quite small, amounting not more than two payments.

According to Sheremet and Sayfulin (1999), in the case of lending, the client pays approximately 30% in advance and the bank finances the remaining amount of the purchase price. The interest rate is 13 to 18% per annum in foreign currency and up to 30% in domestic currency. If the purchase is made in cash the customer is obliged to pay the full amount as a whole.

Sheremet and Sayfulin (1999) show that leasing contract lasts from 13 to 60 months. Repurchase option is 10% of the initial cost of the product or the market price at the time of contract termination. It is possible to structure the contract as financial or operational leasing. Credit, on the other hand, often has shorter terms. Low start-up costs in the case of leasing preserve client's working capital. Credit is characterized by high initial payments that are virtually nullifying the possibility to use additional credits. Changes and improvements can be included in the lease agreement to avoid the technical backwardness or obsolescence of equipment. In the case of credit, one owns the property regardless of whether it is worn out or outdated.

Sheremet and Sayfulin (1999) suggest that equipment leasing suits businessmen who have lack of capital or need equipment that requires improvement every few years. Leasing situation is individual for each owner and a bank makes a decision with the

basis on the specific situation. Equipment leasing is rather flexible but it may be very expensive. The advantage of leasing is that paying the minimum cost one can directly use the equipment. Advance payment is extremely rare in leasing, so customer's capital will not suffer in the near future. It is pretty simple to get leasing.

In case one has bad credit history bank can give a credit refuse. Taking leasing one has enough time to reduce payments within long time. If a client requires equipment that quickly becomes obsolete, all the risks are assigned to a leasing company.

Sheremet and Sayfulin (1999) argue that the disadvantages of leasing are the cost and the ownership. Leasing will always be more expensive than nominal value. Client is obliged to pay the lease even if the equipment is not used. As far as ownership is concerned, at purchasing one becomes the owner after the total sum payment. This is important if equipment has a long lifespan for example building machinery.

Sheremet and Sayfulin (1999) show banking credit services no maintenance and is accompanied by a lease agreement for the entire period. Leasing contract does not require notarization while banking contract should necessarily be certified by a notary officer which costs about 1% of the total agreement amount. Under the rules of the lease contract all risks are borne by the leasing company and under the credit contract runs the client's risk. Person, who has entered a lease agreement, pays only lease payments while entering a credit contract a borrower pays interests, fees, debts, insurance and even taxes.

Comparison of leasing and credit by Bakanov and Sergeev (1999):

According to Bakanov and Sergeev (1999) both methods have their pros and cons associated first of all with the calculations of taxes, and secondly, with the legal issues of property rights, and thirdly, the comparative amounts and structure of the initial and follow-up costs, and the fourth, the timing of payments. Leasing is valuated both by lessee and lessor. The lessee should determine if the equipment leasing is less expensive than buying it and the lessor should calculate the value of the lease payments to obtain an acceptable profit.

A set of complex models for analysis and decision-making have been generated. Bakanov and Sergeev (1999) show the simplest algorithm proposed below also gives good results.

1. A company decides to buy some equipment. As far as leasing analysis is concerned, the aim is to assess the preference of a particular variant of acquisition; ie. purchasing or leasing. If the results of the analysis reveal that the cost of capital at the conclusion of the leasing agreement are substantially lower than the price of borrowed resources, then the average cost of capital used in the capital assets budget preparation has to be corrected and the calculations on the budget have to be repeated. As a result, the projects which previously seemed to be unacceptable may occur appropriate.

2. Once the firm has decided to purchase equipment, a question about the source of funding raises. The main sources are borrowed funds, redistributed income, additional capital stock issues. Leasing occurs as alternative variant. As the assets should be capitalized on the basis of the financial side of leasing relations, one can consider leasing as a form of financing.

Bakanov and Sergeev (1999) suggest that the use of leasing relations, with the observance of law and the rules governing such operations, allows partners to realize their legitimate benefits and perks better. Benefit defined by ownership (tax advantages for capital depreciation and investment tax credit) belongs to the lessor. Under certain conditions leased property may not be reflected on the balance sheet of the user since the ownership is retained by the lessor. It has been argued that, in this case, leasing has advantages over buying. Not reflecting leasing in the balance sheet can make investors assume that the financial position of the company is more stable than it really is. Owing to the lease agreements, a company can sufficiently increase the level of real financial balance while the price of debt and equity capital does not change significantly as could have happen if real credits were used for funding the purchasing of fixed assets and operations results were reflected in the balance sheet.

Bakanov and Sergeev (1999) argue that equipment recipient lease payment is assigned to production costs and therefore it reduces taxable income. Relationship with tax authorities reflects the basic qualitative advantage of leasing in comparison with

purchasing. Corporations are allowed to use accelerated depreciation and other tax payments and apply straight-line depreciation for shareholder's report, i.e. report on the highest profits.

According to Bakanov and Sergeev (1999), the lease agreement can be extremely useful due to relatively short leasing period accompanied by a high level of annual payments which leads to the reported profit decrease and the reduction of the alternative minimum tax amount. In this case the leasing payment would not necessarily be qualified as costs to be deducted in terms of the standard taxation.

Bakanov and Sergeev (1999) furthermore state that the advantages of leasing operation (even with the changes incorporated in the new tax law of foreign countries) have caused leasing to become a leader in finance and investment sphere.

Comparison of leasing and credit by Pavlov (1998):

Pavlov (1998) argues that "leasing is profitable" and summarizes the economic benefit difference between leasing transactions and bank lending by the following table (Table 2.1).

Table 2.1: Analysis of the comparative effectiveness of the acquisition of equipment through financial leasing and bank lending.

FINANCING SOURCE	BANK CREDIT	FINANCIAL LEASING
Subject of financing	Crane	Crane
Cost of subject of financing	5000000,00	5000000,00
Time of a lease	36 months	36 months
Initial installment	30% of the cost ie 1 500000,00	30% of the cost ie 1 500000,00
Interest rate/average annual price increase	18,00%	11,47%
Revenue for the period (excluding VAT)	13000000,00	13000000,00
Operating expenses (excluding VAT)	5500000,00	5500000,00
	Credit-financed acquisition	Financial leasing acquisition
Cost of equipment (including the loan interests payment/leasing payment)	5957943,00	6720000,00
Tax payments related to purchasing	330109,67	–
Income tax, USD	978462,236	339661,016
VAT paid to budget, USD.	587288,13	324915,25
Net earnings, USD.	996196,96	1358644,06
Economic benefit		362447,10 (36,38%)

From Pavlov's (1998) example, it can be seen that by using leasing as a tool for financing equipment purchase, a company saves 362447.10 USD (36.38%) within three years compared to bank lending.

According to Pavlov (1998), the sources of economic impact of lease financing for a company are:

-savings on income tax due to the inclusion of the full amount of lease payments in costs which reduce taxable income;

-savings on property tax using the accelerated depreciation rate of the property which equals to 3. This allows to write off the cost of the equipment three times faster and, therefore reduces the amount of property tax;

-maintaining the attractiveness of trade enterprise not affecting its financial stability;

-receiving equipment as property of enterprise at the residual value by the end of the financial leasing contract i.e. almost by zero cost.

CHAPTER 3 – CASE STUDY: LEASING OPERATIONS IN LLP "FIRM AUTODORSERVIS"

3.1. Introduction

In this chapter the study by the financial department of a construction company "Firm Autodorservis" LLP is shown. This construction firm is engaged in construction of roads and bridges. The firm uses leasing and credit loan for the purchase of construction equipment for its further use in construction of roads and bridges. The aims of the analysis is that to learn how construction firm uses leasing, credit or own money to purchasing necessary for firm construction equipment. The information provided in this chapter has been gathered through meetings with the director of the company and the representatives of the finance department. Topics covered include all the work of the financial department of the company, beginning with preparing a business plan, conducting leasing deal, company's balance sheet, lease payments, customs passing and payments, taxes, insurance and payment of leasing operations.

As a result of the following analyses, company "Firm Autodorservis" LLP chose to work with leasing. According to the director of company "Firm Autodorservis" LLP Procentov's leasing is much more profitable and more convenient to other methods of financing.

3.2. Writing a business plan

The business plan should reflect the following:

- The goals of the project, its orientation, legal support (taxes, state and municipal support);
- Marketing information (competitive environment, long-term program of work, pricing policy);
- Material costs (needs, prices and conditions of supply of raw materials, auxiliary materials, energy, transportation, and so on);
- The location taking into account technological, climatic, environmental, social and other factors;
- Design and engineering part (choice of technology, equipment specification and terms of delivery, the volume of construction, design documentation);

- The organization of the enterprise and overhead costs (management, procurement, the need for licensing activity in the construction, lease terms, terms of depreciation of equipment, the possibility of accelerated depreciation application);
- Staff (need, supply, working hours, payment terms, the need for new equipment training);
- Project implementation schedule (the construction period, manufacture of equipment, installation and commissioning works, operation period);
- Commercial evaluation of the project (income, profitability, cost structure, maturity of financial investments);
- Risk analysis (key factors with analysis of the ways and means to overcome).

3.3. Leasing deal in practice

A typical leasing deal is like as follows.

1. User (lessee) informs the leasing company of the equipment that he needs.

2. Leasing company, ensuring the liquidity of the project, buys the equipment from the manufacturer or other person who sells property that is the subject of the lease.

3. Leasing company (lessor), becoming the owner of the equipment, transfers it to a temporary use with the right of further redemption (defined by the agreement) to the lessee, receiving in return the lease payments.

Leasing relationships are shown in Figure 3.1.

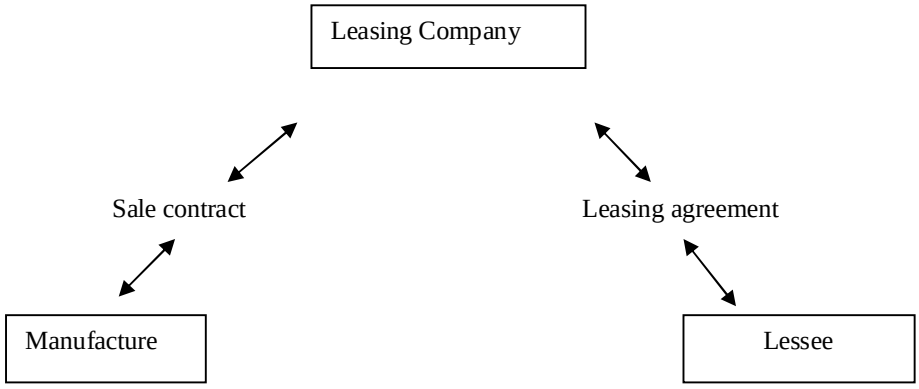


Figure 3.1 The simplest scheme of leasing relations

3.4 The balance of the company

The balance consists of assets and liabilities, the total values of which are equal. An asset is a list of the company's property. Liabilities show to whom and how much the company is indebted. Table 3.1 shows the balance of the analyzed company activity "Firm Autodorservis" LLP.

Table 3.1: The balance activity of the enterprise.

	THOUSAND tg.		THOUSAND tg.
Account assets (cash)	100000	Liability. Account payable (debts to suppliers of materials, components)	19000
Bills receivable (clients' debts)	50000	Arrears in payments (taxes, salary, etc.)	51000
Stock	30000	Short-term loans (up to 12 months)	125000
Total current assets (floating capital)	180000	Total current liabilities (short-term liabilities)	195000
Fixed assets:		Long-term loans (over than 1 year)	150000
Territory, land Buildings and constructions (minus depreciation)	50000 125000 -15000		
Equipment (minus depreciation)	250000 -100000		
Total fixed assets	310000	Equity capital (net worth)	125000
Other assets (intangible)	15000	An increase in equity capital (net income or loss)	35000
		Total equity capital	185000
Total assets	505000	Total liabilities	505000

The basis of the cash flow plan is the cash flow analysis method. It is common to the "classical" methods of investment analysis and used in all the most well-known methods of planning and evaluation of investment projects.

The cash flow plan, developed in the leasing department of analyzed enterprise, is shown below.

Table 3.2: The cash flow plan ("cash flow").

№	Name of an item	Prior to the start of production	2008 Thousand tg.	2011 Thousand tg.
1	Scope of work	-	1000	1200
2	Variable costs	-	700	850
3	Operating (general) costs	500	64	200
4	Interest on loans	10	100	100
5	Taxes and other payments	-	30	6
6= 1-2-3-4-5	Cash-flow from operating activities	-510	106	44
7	Payments for the assets acquisition	2500		
8	Assets revenue			10
9=8-7	Cash-flow from investing activities	-2500		10
10	Share capital	1500	—	
11	Loan capital	1800	—	—
12	Payments for redemption of loans			
13	Payment of dividends	—	-10	-30
14= 10+11-12-13	Cash flow from financing activities	3300	-10	-30
15=16 for preliminary period	Cash-balance for beginning of period	0	290	386
16= 6+9+14+15	Cash-balance for end of period	290	386	410

The following part illustrates the results of calculations of current and future solvency of "Firm Autodorservis" LLP. According to the calculations, profit remaining at the disposal of the company during 2004-2011 after taxation and costs for social and other needs, will be approximately $ 22.6 million (equivalent to tenge).

Delivery to the enterprise during 2004-2011 for leasing of equipment valued at 23.5 million USD allows, using accelerated depreciation mechanism, on average per year about 4 million USD.

To assess the solvency of "Firm Autodorservis" LLP analytical balance data: assets - in term of their conversion into cash, and liabilities - on the urgency of pending payment were grouped.

Balance asset items:

Group I - quick-assets: cash; bank account; other bank accounts; short-term financial investments; VAT on purchased goods. Total: at the beginning of the year - 881460 at the end of the year - 2541711.

Group II - average realizable assets: accounts receivable. Total: at the beginning of the year - 7999772, at the end of the year - 20563816.

Group III - slowly realizable assets: productive supplies; consumable supplies, other supplies and expenses. Total: at the beginning of the year - 7459522, at the end of the year 20563816.

Group IV - illiquid assets: fixed assets at net book value; intangible assets at net book value; capital investments; advances to suppliers and contractors; equipment; long-term financial investments. Total: at the beginning of the year - 74035505, at the end of the year - 73654354.

Balance liability items:

Group I - short-term liabilities; short-term loans; bank loans to workers; short-term loans; advance payments received from customers. Total: at the beginning of the year - 4143456, at the end of the year - 4217647.

Group II – middle-term liabilities: calculations and other liabilities. Total: at the beginning of the year - 12456090, at the end of the year - 34750460.

Group III - long-term liabilities: long-term bank loans and borrowings. Total: at the beginning of the year - 236000, at the end of the year - 175200.

Group IV - permanent liabilities: statutory fund; special funds and earmarked funding; provisions for liabilities and charges; deferred income; retained earnings. Total: at the beginning of the year - 74234525, at the end of the year - 80353587.

Enterprise balance is liquid, if each group of assets completely or almost covers a comparable group with obligations of the enterprise. A more accurate assessment of balance liquidity of "Firm Autodorservis" LLP was analyzed on the basis of the following relations.

1. Liquid and illiquid assets:

(I group of assets + II group of assets + III group of assets) / IV group of assets

At the beginning of the year = 16340754/74035505 = 0.22072

At the end of the year = 43849292/73654354 = 0.59534

A normal ratio is ratio, where the amount of liquid assets is equal to the sum of illiquid ones. It is important to take into account the dynamics of this ratio. "Firm Autodorservis" LLP dynamics for three quarters is positive. The ratio increased from 0.22072 to 0.59534.

2. Equity and borrowed assets:

Group IV of liabilities/(Group I of liabilities + group II of liabilities + III group of liabilities)

At the beginning of the year = 74 234 525/16 835 546 = 4.40939

At the end of the year = 80 353 587/39 143 307 = 2.05281

This ratio should be equal to about 2:1. At the end of the year indexes of "Firm Autodorservis" LLP fit into the normative ratio.

3. Current assets to equity ratio:

(Group IV of liabilities + Group III of liabilities - Group IV of assets)/Group IV of liabilities

At the beginning of the year = 435 020 / 74 234 525 = 0.00586

At the end of the year = 6 874 433/80 353 587 = 0.085552

Increase in the ratio indicates the increase in the degree of mobility of equity capital.

4. The ratio of bills receivable and payable:

Group II of assets/Group II of liabilities

At the beginning of the year = 7 999 772/12 456 090 = 0.64224

At the end of the year = 20 743 765/34 750 460 = 0.59693

The optimal amount of bills payable is satisfactory if it is about twice secured by bills receivables. If the ratio is less than 2, the borrower may be non-creditworthy, in consequence of slow of conversion to liquid money of equity capital.

5. Operational liquidity ratio:

Group I of assets/Group I of liabilities.

At the beginning of the year = 881 460/4 143 456 = 0.212735

At the end of the year = 2 541 711/4 217 647 = 0.60264

The value of this ratio is recognized sufficient if it is equal to or greater than 1. The results indicate a favorable momentum of ratio improvement.

6. Liquidity ratio:

(Group I group of assets + Group II of assets)/(Group I group of liabilities + Group II of liabilities)

At the beginning of the year = 8 881 232/16 599 546 = 0.53503

At the end of the year = 23 285 476/38 968107 = 0.59755

If the value of this ratio is less than 0.5, the borrower may be untrustworthy. However, too high liquidity ratio (greater than 1) is not desirable. This ratio indicates poor efficiency of the use of money and other resources. The most reasonable data of this ratio is in the range 0.7-0.8.

The results of calculation of the liquidity ratio according to the balance of "Firm Autodorservis" LLP show a trend to improved analytical index and the fact that normative ratio can be achieved in the next 1-1.5 years.

7. The coverage ratio:

(Group I of assets + Group II of assets + Group III of assets)/(Group I of liabilities + Group II of liabilities)

At the beginning of the year = 16 340 754/16 599 546 = 0.98441

At the end of the year = 43 849 292/16 599 546 = 1.12526

Good ratio is the ratio not less than 1, and sufficient 2. The coverage ratio of "Firm Autodorservis" LLP can be considered satisfactory.

Equity ratio characterizes the presence of working capital of an enterprise required for its financial stability. The calculation was carried out as follows:

Section I of liability - Section 1 of asset

Section II of asset + Section III of asset

At the beginning of the year = 73952 705 – 74035 505 = - 82 800 = 0.00486

7955973 + 9078593 = 17034566

At the end of the year = 79 304 374 – 73 654 354 = 5 650 020 = 0.12325

22 809 491 + 23 033 049 = 45 842 540.

In accordance with regulatory requirements equity ratio at end of accounting period value must be at least 0.1. Since the beginning of the year, this index of "Firm Autodorservis" LLP was lower than the regulatory value. The index values in the two reporting data are compared, i.e. reestablishing (loss of) solvency index was calculated. The index (subject to the regulatory requirements for the current liquidity ratio) certifies that "Firm Autodorservis" LLP has real opportunity to restore its solvency. Thus, the requirements for the development of financing scheme and providing guarantees scheme for the project to supply equipment to the international financial leasing have been fullfilled.

3.5. Calculation of the lease payments

3.5.1. General provisions

The lease payments include: amortization of the leased property for the entire term of the leasing agreement, the lessor’s compensation for the use of borrowed assets, commission charge, fees for lessor’s additional services provided by the leasing agreement, and the value of the property redeemed, if the agreement provides for redemption and payment procedure of this value in the form of shares in the lease payments. Lease payments are paid in the form of individual contributions. At the conclusion of the agreement, the parties establish the total amount of lease payments, the form, the method of calculation, the frequency of contribution, as well as methods of payment. Payments can be made in cash, in compensatory form, as well as in mixed form. Thus, the price of the products or services of the lessee is established in accordance with applicable legislation.

According to accrual basis of lease payments parties may choose:

- Method “with a fixed total amount”, when total amount of payment is charged in equal shares over the duration of the agreement in accordance with the frequency agreed by parties;
- Method "with advance", when the lessee in conclusion of the agreement pays the lessor in advance in the amount agreed by the parties, and the remainder of the total amount of lease payments (net of advance) is accrued and paid during the duration of the agreement, as well as in the payment of the fixed total amount ;

- Method of "minimum payment" when the total amount of payments includes amortization of the leased property for the entire duration of the agreement, the payment for borrowed assets used by the lessor, commission fees and payment for additional services of the lessor under the agreement and the cost of a leasing property redeemed, if repurchase is provided by the agreement.

In the leasing agreement the parties establish the frequency of payments (annual, quarterly, monthly, weekly), and the terms of the payment for dates. By agreement of the parties contributions may be made in decreasing amount, increasing amount of equal shares.

3.5.2. Algorithm

When the loan debt received by the lessor for the purchase of the property is reduced, then the amount of payment for the used credits and the size of the commission fee to the lessor are reduced. If the interest rate is often determined by the parties as a percentage of the unpaid value of the property, it is advisable to perform the calculation of lease payments as follows:

1. The amounts of the lease payments for the years covered by the lease agreement are calculated.

2. The total amount of lease payments for the duration of the lease agreement as the sum of payments for each year is calculated.

3. The amounts of lease payments in accordance with the contributions frequency selected by the parties as well as their accrual method of payment agreed are calculated.

In operating lease when the term of the agreement is less than one year, the amounts of the lease payments are determined by months. Also, if the lessee is a small enterprise, the value added tax is not included in the total amount of the lease payments.

The commission fee may be determined by agreement of the parties as a percentage of:

a) The book value of the property - the subject of the agreement;

b) On the average annual value of the property.

One of the most difficult elements of a leasing transaction and preparation of leasing agreement is the determination of the amount of the lease payment. The leasing

department of the company analyzed believes that it advisable preliminarily to organize and evaluate the different proposals for the identification of lease payments.

Lease payments depend on:

-Types of leasing (financial, operational, and so on);

-Forms of settlements between the lessor and the lessee (monetary compensation, mixed);

-Composition of the elements taken into account;

-The accrual basis applied: with fixed total amount; with advance payment (deposit); with the purchase of the property at net book value;

-Periodicity of payments (annual, semi-annual, quarterly, monthly);

-Urgency of making the payment (in the beginning, middle or end of the payment period);

-Payment method: proportional, in equal shares, with increasing and decreasing amount (depending on the financial condition of the lessee and the terms of the agreement).

The lease payment that the lessee will pay for the time of leasing to the lessor, should include the following elements:

1) Depreciation of equipment. It can be charged according to: the regulatory act; accelerated method (for example, by a ratio of 1.5 or 2.5), decelerated method (for example, a ratio of 0.5 or 0.7);

2) The fee for the financial resources attracted by the lessor for the leasing transaction. The value of these resources varies considerably depending on market conditions;

3) Leasing margin of the lessor. In some cases, the following terminology is used: commissions, commission fees, etc.;

4) The risk premium, the amount of which depends on the different types of risks faced by the lessor;

5) Payment for additional services provided by the leasing agreement;

6) Payment for the insurance of the leased property, if it was insured by the lessor;

7) The amount of taxes paid by the lessor for the lease property.

The lease payments are calculated based on the average value of the payment of property (at the beginning and end of the year). The fact is that the frequency of payment

is calculated by dividing the total amount of payments to the number of payments over the lease term.

In each estimated year, the payment for loans used correlates with the average amount of credit unpaid in the previous year or with the average residual value of the property. This approach also ignores the amount of debt, constantly changing during the year depending on the frequency of payments.

3.6. Issues arising in the calculation of leasing operations

The formula for calculating the lease payments in accordance with the second methodological approach has the original form (3.1):

$$Lp = V \times \frac{R \div T}{1 - 1 \div (1 + R \div T)^{T \times C}} \quad \textbf{(3.1)}$$

where:
Lp - the amount of the lease payments,
V - the value of the leased property,
C - the term of the agreement,
R - leasing interest rate,
T - the frequency of lease payments.

In "Firm Autodorservis" LLP at the amount of equipment received on leasing of 15 million USD, the contract term of 5 years, the lease interest rate 9%, semi-annual periodicity of payment of the sum will always equal to 1895.53 USD thousand.

$$Lp = 15000000 \times \frac{0{,}09 \div 2}{1 - 1 \div (1 + 0{,}09 \div 2)^{5 \times 2}} = 150000000 \times \frac{0{,}045}{1 - 1 \div (1 + 1{,}045)^{10}} =$$

$$15000000 \times \frac{0{,}045}{1 - 1 \div 1{,}5530} = 15000000 \times \frac{0{,}045}{0{,}3561} = 15000000 \times 0{,}126369 = 1895{,}53$$

At the conclusion of the lease agreement, as a rule, it does not provide for full amortization of value of the leased property.

To determine the amount of payment, adjusted for the value of the residual value selected by a client, present value factor formula is used (3.2):

$$Co = \frac{1}{1 + Rv \times 1 \div (1 + R \div T)^{T \times C}} \quad \textbf{(3.2)}$$

where:

Rv - residual value.

If the residual value of "Firm Autodorservis" LLP is equal to 5% (0.05), then the present value factor is equal to:

$$Co = \frac{1}{1 + 0{,}05 \times 1 \div (1 + 0{,}09 \div 2)^{5\times2}} = \frac{1}{1 + 0{,}05 \div 1{,}553} = \frac{1}{1{,}032196} = 0{,}96881$$

If the first rent payment is made in advance at the time of signing the protocol on acceptance of the equipment by the lessee, who is not at the end, but at the beginning of the interest period in the semi-annual frequency of interest, the formula will be edited in the calculation of the amount of payment (3.3):

$$Lp_a = \frac{1}{1 + R \div T} = \frac{1}{1 + 0{,}9 \div 2} = \frac{1}{1{,}045} = 0{,}95694 \quad \textbf{(3.3)}$$

The final amount of the lease payments made to the leasing agreement will be:

Lp_t=15000000 x 0,126369 x 0,96881 x 0,95694 = 1757337.

However, this amount should be considered basic, but not complete. The fact that it is also necessary to take into account some other elements of lease payments, such as the risk premium; payment for additional services provided by the lessor to the lessee stipulated in the leasing agreement, payment for the insurance of the leased property (if it was insured by the lessor); the amount of taxes paid by the lessor for the leased property. Risk premium of the lessor may be included in the interest rate of the lease percent. Leasing company, as a rule, takes into account the risk factors and incorporates them in price: higher risk is accompanied by higher rates of lease payments.

Additional adjustments for services provided by the lessor to the lessee (e.g., consulting, legal, technical, etc.) can be erratic and uneven. It depends on the volume of services and conditions of the lease agreement. They can be calculated on the basis of absolute value and added to the principal amount of the lease payment. Payment for the insurance of the leased property is also unstable, because it is calculated on the residual value of property and, therefore, should simply be added to the principal value of the lease payment.

Of course, the above formula cannot be considered as universal. Each specific leasing transaction requires an individual approach.

3.7. To rent or buy equipment? The example of "Firm Autodorservis" LLP

This problem is a special case of measuring performance. Its solution is to compare the current value of two cash flows: payments related to the acquisition of equipment, and payments determined by the lease agreement.

Let us consider the decision for the provision of equipment with the cost of 1 million USD in 2009 (for the Omsk-Pavlodar road).

Payments flow in case of equipment leasing consists of 48 monthly payments of 21000 USD (Terms and conditions for leasing: term - 4 years, monthly lease fee - 21000 USD, to be paid at the beginning of each month). Payments flow in case of purchase of equipment includes an advance and the annual costs to repay the debt. In addition, the residual value of the equipment is considered. (Terms of sale: price - 1 million USD, advance - 200000 USD, the remaining amount is extended as a loan for 5 years at 6% per annum, the repayment of debt - at the end of each year. The residual value of the equipment at the end of the collection period - 400000 USD).

Annual expenses amount for repayment of debt by purchasing is calculated taking into account the reduction factor (3.99271), as well as through the discount at the rate of 8%. The current value of payment flow is defined as:

P_1=200+189,92 x3,9927-400 x1,08^{-5} = 686,06 thousand dollars.

In turn, the current value of lease with the reduction factor (3.43188) is:

P_2= 21x12 x 3,43188 = 864,83 thousand dollars.

Thus, the rent in these conditions will be much more expensive.

In early 2009, while performing one leasing project in "Firm Autodorservis" LLP, the leasing department developed a methodology of comparative analysis for the acquisition of equipment under leasing and loan conditions. They proceeded from the fact that two methods, leasing and acquisition of equipment by loan, have their pros and cons that are associated, first, with payment of taxes, second, with the legal issues of property rights, third, with comparative volume and structure of the initial and follow-up costs and, fourth, the term of payments.

3.8. Repayment of the loan due to depreciation

It is provided that, in order to create conditions for the development of high-tech industries and the introduction of efficient machinery and equipment, the company has the right to apply accelerated depreciation mechanism of the active part of production assets. Therefore, When calculating depreciation on purchased equipment the company can use accelerated depreciation mechanism. Accelerated depreciation allowances will be the source of the principal on the loan.

Until the moment of deposit of equipment on the balance of the company, the source of compensation of borrowings on principal to the bank is the company's after-tax profit. Once equipment was deposited on the balance sheet, the source of compensation of borrowings on principal to the bank could be depreciation allowances on this equipment. Depreciation shall accrue to the equipment after it was deposited on the balance, that is, after 8 months. Therefore, for all three variants compensation payable by the borrower to the creditor on principal at the amount of 1340 thousand USD during this period will be made at the expense of profit remaining at the disposal of the company after taxation.

3.9. Repayment of the loan out of the profits

Currently, the profit tax is 30%. Thus, when calculating income profit tax, the taxable profit shall be reduced by the sum:

a) Intended to finance capital investments for production and non-production, as well as to repay bank loans received and used for this purpose, and the interest on these loans;

b) At the amount of 30% of the capital investments on environmental protection measures;

c) To conduct research and development activities by enterprises and organizations;

d) Including insurance reserves for life insurance within the stipulated percentage points;

e) The maintenance costs by the health, education, culture and sports institutions, child care providers, children's camps, board and care facility, housing fund, as well as some others.

However, all tax benefits should not reduce the actual amount of tax calculated excluding benefits, for more than 50%.

When calculating the expenses appreciation ratio of enterprise taking into account different privileges granted to it we proceed from the assumption that one quarter of all benefits is accounted for purchase of equipment for the project. Consequently, the appreciation of purchase of the equipment in a loan through the use of profits will be:

30% x [1 - (0,5 x 0,25)] = 26,25%.

Table 3.3: The calculation of appreciation of the purchase of equipment on loan

VARIANT №	REFUND OF LOAN TO THE LOANER OUT OF THE PROFIT, USD THOUSAND		APPRECIATION RATIO	LOAN APPRECIATION DUE TAXATION		
	On principal for 8 months	At % for 4 years 8 months		On principal	at %	Total
	a	b	c	d=axc	e=bxc	f=d+e
1	1457,1	7526,4	0,2625	382,5	1975,6	2358,1
2	1457,1	4754	0,2625	382,5	1247,9	1630,4
3	1457,1	2641,2	0,2625	382.5	693,3	1075,8

Under the contract, equipment will be supplied to the enterprise in 6 months after the payment to the supplier (according to the first variant - 100% prepayment, according to the second and third - advance).

3.10. Analysis of the customs duties and fees in lease transactions: Value added tax

When moving the equipment through customs border of the Republic of Kazakhstan the following customs duties should be paid: VAT, excise duties, license fees charged by the customs authorities of the RK; customs fees for customs clearance, for the storage of goods, for customs escort of goods, information and counseling fees, for making an initial decision, for participation in customs auctions.

Customs duties on construction equipment are 15% of the equipment cost. Consequently, the value of customs duty is equal to 1530 thousand USD. The enterprise will need to take the credit. The calculation provides for a credit for the first three quarters by 30% per annum in the payment of principal and interest on loan expiration. Interest on the loan is 344.3 thousand USD. Given the fact that the settlement on the loan and the interest will be out of profits, the total expenditure of the customs duties will be equal to 2230.4 thousand USD. Customs charges for customs clearance are charged in the currency of the Republic of Kazakhstan (tenge) in the amount of 0.1% of

the customs value of goods, and for the customs clearance of goods - additional charges are in foreign currency ($ or €), the rate of which is quoted by Halyk Bank of the Republic of Kazakhstan, in the amount of 0, 05% of the customs value of goods.

For the customs clearance of goods outside the allocated places and working hours of the customs authorities of the Republic of Kazakhstan, double customs fees are charged.

Customs charges for customs clearance will be 10.2 thousand USD (10200 thousand USD x 0,001) and for the customs clearance of goods, respectively - 5.1 thousand USD. The total value is 15.3 thousand USD. Customs charges for storage of goods in customs shelter warehouse owned by the customs authorities of the Republic of Kazakhstan shall be charged at a rate specified by the State Customs Committee of the Republic of Kazakhstan on the basis of the average cost of services rendered.

Customs fees for customs escort of goods are charged in amounts determined by the State Customs Committee of the Republic of Kazakhstan in coordination with the Ministry of Finance of Kazakhstan. Excise taxes apply to goods imported into the customs territory of the Republic of Kazakhstan in accordance with the Customs Code and the Law of the Republic of Kazakhstan "On Excise Tax".

VAT is calculated according to the tax base. The taxable base for goods imported into the territory of the Republic of Kazakhstan include customs value of goods, customs duties, customs fees, and on excisable goods - excise amount. The customs value of goods shall be determined in accordance with the customs legislation of the Republic of Kazakhstan.

VAT is 2349,06 thousand USD, or 20% of 11745,3 thousand USD (10200+1530+10,2+5,1). The company should take a credit in this amount for three quarters to pay VAT in the absence of its own funds. Table 3.4 shows the calculation of the costs of the company to pay the value added tax, customs duties and taxes, with the need to get a loan for these operations. Repayment period of the loan - three quarters of a relevant interest of each variant was used in the calculation.

Table 3.4: Enterprise's costs financing (loaning) for VAT, customs duties and charges, USD thousand

VARIANTS №	CUSTOMS DUTIES	AMOUNT % FOR THE LOAN	APPRECIATION RATION	APPRECIATION UNDER CUSTOMS DUTIES	PROFIT TO REPAY THE LOAN FOR THE PAYMENT OF VAT		TOTAL, APPRECIATION UNDER VAT	TOTAL EXPENDITURE
					In part of principal	of %		
	a	b	c	d=(a+ b)xc	e	f	g= (e+f)xc	h=a+b+d+f+g
1	1545,3	347,7	0,2625	496,9	600.3	528,5	296,3	3214,7
2	1545,3	208,6	0,2625	460,4	600,3	317,1	240,8	2772,2
3	1545.3	115,9	0,2625	436,1	600,3	176.1	203,8	2477.2

Total expenditure incurred by the company for the purchase of necessary equipment on account of credit is presented in Table 3.5.

Table 3.5: Expenditures of "Firm Autodorservis" LLP of the purchase of equipment on account of credit resources, in thousand USD

№	AMOUNT OF PRINCIPAL AND % FOR THE CREDIT	CREDIT APPRECIATION DUE TO TAXATIN	EXPENDITURES FOR CUSTOMS DUTIES LOANING	APPRECIATION OF EXPENSES UNDER CUSTOMS DUTIES	ADDITIONAL EXPENDITURES FOR VAT ON APPRECIATION BASE	TOTAL EXPENDITURES FOR PURCHASE OF EQUIPMENT
	a	b	c	d	e	f=a+b+c+d+e
1	17726,4	2358,1	1893	496,9	824,8	23299,2
2	14954	1630,4	1753,9	460,4	557,9	19356,6
3	12841,2	1075,8	1661,2	436,1	379,9	16394,2

Calculation of total costs of "Firm Autodorservis" LLP for the purchase of equipment under financial leasing on the other hand is performed for three variables. It is provided that for the first and second variant of leasing (i.e., as for the first and second variant to attract credit resources) the lessor is domestic bank or leasing company. According to the third variant of leasing, (as for third variant of crediting) the lessor is an international investor or leasing company.

The lease term for all three variants is 4 years. Under the first variant, lease payments are paid every quarter, i.e., in total 16 payments and for the second and third variants - every six months, i.e. 8 payments in total. Net book amount at which the equipment will be redeemed by the company in the property or, as stated in the lease agreement, at the "price of a possible purchase" was calculated in two ways: at the amount of 1% and 3% of the book value. There are also two variants of the terms of payment: at the end of the period (quarter, half); in the early period.

Lease payments (lease percent) include the following main elements: depreciation; payments for resources, attracted by the lessor for the transaction; leasing margin, including the lessor's income for services rendered.

According to the first variant, value of attracted credit resources is 30% per annum, the leasing margin is - 4% per annum.According to the second variant value of attracted credit resources is - 18%, leasing margin is - 3%. According to the third variant value of attracted credit resources - 10%, leasing margin is - 2%.

The formula 3.1 is used to calculate the amount of the lease payments:

$$Lp = V \times \frac{R \div T}{1 - 1 \div (1 + R \div T)^{T \times C}}$$

where:
Lp - the amount of the lease payments;
V - the value of the leased property,
C - the term of the agreement,
R – the rate of leasing percent,
T - the frequency of lease payments.

In accordance with the terms and conditions considered, the calculations under the first variant are as follows:

$$Lp = 10200 \times \frac{0{,}34 \div 4}{1 - 1 \div (1 + 0{,}34 \div 4)^{16}} = 10200 \times \frac{0{,}085}{1 - 1 \div 3{,}6887} =$$

$$10200 \times \frac{0{,}085}{1 - 0{,}2710} = 1189{,}46 \text{ thousand dollars}$$

The formula 3.2 of present value factor is used to determine the amount of payment, adjusted for the value of the residual value selected by the client:

$$Co = \frac{1}{1 + Rv \times 1 \div (1 + R \div T)^{T \times C}}$$

where: Rv — residual value,

$$Co = \frac{1}{1 + 0{,}01 \times 1 \div (1 + 0{,}34 \div 4)^{16}} = 0{,}9973$$

After adjusting for Co (ratio of residual value) Lp will be equal to 1186.25 thousand USD. At 3% of residual value Co is equal to 0.99193. Then Lp will be equal to 1179,86 thousand USD. Amount of lease payments at 1% of the residual value of the equipment is: (1186, 25 x 16) +102 = 19082 thousand dollars. Amount of lease payments at 3% of the residual value is: (1 179, 86 x 16) +306 = 19 183,76 thousand USD.

If the first rent payment is made in advance at the time of signing the protocol on acceptance of the equipment by the lessee, the calculation of the amount of payment includes another adjustment to formula 3.3:

$$Lp_a = \frac{1}{1 + R \div T}$$

This correction factor is equal to 0.9217. This means that the expenditure of "Firm Autodorservis" LLP is reduced by 8% due to the terms of payments of lease payments. Taking into account this correction factor, the total amount of lease payments is:

17 595.9 thousand USD for 1% of the residual value and 17 705.7 thousand USD for 3% of the residual value.

According to the currently existing rules, expenditure of the company for purchase of the equipment must also include expenses, identical in direction and amount of credit scheme of purchase of equipment. Expenditure of "Firm Autodorservis" LLP for customs duties, fees and VAT are taken into account in mode to agreement with the leasing company on that the payments made to the lease agreement. The lessor (leasing company) pays them at the border, and then they are taken into account in addition to the lease payments over the first three quarters, and shall be paid by the lessee above the estimated value of leasing interest on terms to attract the credit resources for this

transaction and to obtain the relevant leasing margin by the lessor. As you can see, the lessor is interested in the scheme.

Then, in contrast to the expenditure for the loan appreciation will be carried out not at a rate of 0.2625, but at the rate of 0.04. According to the first variant appreciation is 124 USD thousand [(1893 + 600.3 + 607.8) x 0.04].

Company's expenditures for leasing (with the payment at the end of the quarter) plus expenditures for customs duties, fees, VAT are (in thousands of USD) according to the variant are:

1% of the residual value - 21706,8 =(19 082+ 1893+607,8 + 124);

3% of the residual value - = 21808,6=(19183,8+2624,8).

Company's expenditures for leasing (with the payment at the beginning of the quarter) plus expenditures for customs duties, fees, VAT are (in thousands of USD) according to the variant are:

1% of the residual value - 20 220,6 = (17 595,8 + 2624,8);

3% of the residual value - 20 330,4 = (17 705,6 + 2624,8).

Comparison of the company's expenditures for the purchase of equipment using a loan to the expenditures of leasing under the first variant and various schemes of the residual value and the terms of payments is as follows:

23 299,2 : 21 706,7 = 1,073, i.e., the expenditures for loan exceeds the expenditures for leasing by 7.3%;

23299,2 : 21808,6 = 1,068 (excess - 6.8%)

23299,2 : 20220,6 = 1,152 (excess - 15.2%);

23299,2 : 20330,4 = 1,146 (excess - 14.6%).

Under the second variant, in accordance with the terms and conditions considered, the expenditure of the company for leasing will be:

$$Lp = 10200 \times \frac{0{,}21 \div 2}{1 - 1 \div (1 + 0{,}21 \div 2)^{8}} = 10200 \times \frac{0{,}105}{1 - 1 \div 2{,}2228} = 1947{,}18 \text{ thousand dollars}$$

In case of redemption of equipment at the end of the lease period for the residual value of 1% Co will be:

$$Co = \frac{1}{1 + 0{,}01 \times 1 \div 2{,}2228} = \frac{1}{1{,}004499} = 0{,}99552$$

In this case, company's one-time lease payment to the lessor is:

1947,18 x 0,99552 = 1938,46 thousand dollars.

In case of the redemption of equipment for the residual value of 3%, Co will be 0.98668.

In this case, a one-time lease payment is:

1947.18 x 0.98668 = 1921,24 thousand USD

Amount of lease payments is (in thousand USD) will be:

1% of the residual value — (1938,46 x 8)+102 = 15 609.

7,3% of the residual value — (1921,24 x 8)+306 = 15 675,9.

If the company will make the lease payments to the lessor at the beginning of every six months, the correction factor is:

Lp_a=1/1,105 = 0,905.

This adjustment will reduce the lease payments by more than 9%.

Taking into account adjustment to the residual value of the equipment and the terms of payments the total value of the lease payments under the second variant will be:

1947,18 x 0,99552 x 0,905 = 1754,3

(1754,3 x 8)+102 = 14 136,4 thousand USD

1947,18 x 0,98668 x 0,905 = 1738,73

(1738,73 x 8)+306 = 14 215,8 thousand USD

As in the first variant, expenditure for the customs duties and VAT under the agreement with the leasing company may be made to the lease agreement, and further considered in the lease payments on the terms agreed by the parties. Under this variant, appreciation to leasing will not be calculated at a rate of 0.2625, as in the issuance of a loan, but at a rate of 0.03.

For "Firm Autodorservis" LLP, appreciation for the payment of customs duties and VAT is:

(1753,9 + 600,3 + 364,7) x 0,03 = 81600 USD.

Total expenditures of “Firm Autodorservis” LLP for lease payments (with the payment at the end of the quarter), customs duties, fees, VAT are (in thousand USD) according to the variant are:

1% of the residual value — 17809,9 =(15 609,7 + 1753,9+364,7 + 81,6);

3% of the residual value — 17876=(15 675,9 + 2200,2).

Expenditures of “Firm Autodorservis” LLP for leasing (with the payment at the beginning of the quarter) plus expenditures for customs duties, fees, VAT (in thousand USD) according to the variant are:

1% of the residual value — 16336,6 =(14 136,4 + 2200,2);

3% of the residual value —16416= (14 215,8+ 2200,2).

The expenditures of “Firm Autodorservis” LLP for the purchase of equipment with loan compared to the expenditures for leasing under the second variant is as follows:

19 356,6 : 17 809,9 = 1,087, i.e., the expenditures for loan exceeds the expenditures for leasing by 8,7%;

19 356,6 : 17 876 = 1,083 (excess - 8,3%);

19 356,6 : 16 336,6 = 1,185 (excess -18,5%);

19 356,6: 16416= 1,179 (excess -17,91%).

Calculating the cost under the third variant. In accordance with the terms and conditions, the expenditure of “Firm Autodorservis” LLP for organization of financial leasing of necessary equipment under the third variant is calculated as follows:

$$Lp = 10200 \times \frac{0{,}12 \div 2}{1 - 1 \div (1 + 0{,}12 \div 2)^{8}} = 10200 \times \frac{0{,}06}{1 - 1 \div 1{,}59385} = 1642{,}51 \text{ thousand dollars}$$

In case of redemption of equipment at the end of the lease period for the residual value of 1% , Co will be:

$$Co = \frac{1}{1 + 0{,}01 \times 1 \div 1{,}59385} = \frac{1}{1{,}006274} = 0{,}99377$$

In this case, one-time lease payment of “Firm Autodorservis” LLP to the lessor is:

1642,51 x 0,99377 = 1632,28 thousand USD

In case of the redemption of equipment for the residual value of 3%, Co will be 0,981526. In this case, a one-time lease payment is:

1642,51 x 0,981526 = 1612,17 thousand USD

Amount of lease payments will be:

1 % of the residual value — (1632,28 x 8)+102 000 = 13160 thousand USD,

2; 35% of the residual value — (1612,17 x 8)+306 = 13203,4 thousand USD.

If the company will carry out the lease payments to the lessor at the beginning of every six months, the correction factor is:

$$Lp_a = \frac{1}{1{,}06} = 0{,}9434$$

This adjustment will reduce the lease payments by 6,6 %.

Taking into account adjustment to the residual value and the terms of payments, the total value of the lease payments under the third variant will be:

1642,51 x 0,99377 x 0,9434 = 1539,89

(1539,89 x 8)+ 102= 12421,1 thousand USD

1642,51 x 0,98668 x 0,9434 = 1520,92

(1520,92 x 8)+306 = 12 473,4 thousand USD

Expenditures of "Firm Autodorservis" LLP for customs duties, fees and taxes under the third variant are considered as above. The leasing company pays them at the border, and then they are taken into account in addition to the lease payments over the first three quarters and shall be paid by the lessee, above the estimated value of leasing interest.

Under this variant, appreciation will not be calculated at a rate of 0.02 but will be:

(1661,2+ 600,3 + 202,6) x 0,02 = 49,3 thousand USD

Expenditures of “Firm Autodorservis” LLP for lease payments (with the payment at the end of the quarter) plus expenditure for customs duties, fees, VAT (in thousand USD) according to the variant are:

1 % of the residual value— 15 073,3=(13 160,2 +1661,2+ 202,6 + 49,3);

3% of the residual value— 15 116,5= (13 203,4+ 1913,1).

Expenditures of “Firm Autodorservis” LLP for leasing payments (with the payment at the beginning of the quarter) plus expenditures for customs duties, fees, VAT (in thousand USD) according to the variant are:

1% of the residual value — 14 334,2= (12 421,1+ 1913,1);

3% of the residual value — 14 386,5 =(12 473,4 + 1913,1).

The expenditures of “Firm Autodorservis” LLP for the purchase of equipment using loan compared to the expenditures for leasing under the second variant is as follows:

16 394,2: 15 073,3 = 1,088, i.e., the expenditures for loan exceeds the expenditures for leasing by 8.8%;

16 394,2 : 15 1 16,5 = 1,085 (excess - 8,5%);

16 394,2 : 14334,2 = 1,144 (excess - 14,4%);

16 394,2 : 14 386,5 = 1,140 (excess - 14,0%).

3.11. Insurance

Insurance is either voluntary or compulsory for participants of leasing depending on the agreement. Insurance can be provided against the following risks: property risks, financial risks, political risks, risks associated with different types of civil and professional responsibility: risks associated with the life and health of the staff, management, risk of shareholders; risks related to items of intellectual property rights; risks associated with failures in the marketing strategy, risks associated with the administrative arbitrariness or criminal activity.

Almost all insurance companies and commercial banks have the right to conduct these types of insurance for leasing operations. The National Bank of Kazakhstan, as the supervisory authority, does not have a right to interfere in the banks’ and insurance companies’ business activity, including the transactions related to leasing.

3.12. Analysis of the calculations of leasing operations in "Firm Autodorservis" LLP

3.12.1. Calculation of lease payments under an operating lease agreement

Terms of the agreement:

Value of the property - the subject of the agreement - 72.0 million tenge. Term of agreement - 2 years;

The rate of depreciation allowances for a full recovery 10% per annum;

The interest rate on loans used by the lessor for purchase of property, - 50% per annum;

The value of used credit resources - 72.0 million tenge;

Percentage of commission to the lessor - 12% per annum;

Additional services of the lessor provided by the lease agreement, total - 20.0 million tenge, including: rendering consulting services to use (exploitation) property - 7.5 million tenge; travel expenses - 2.5 million tenge; personnel training - 10.0 million tenge, value-added tax rate - 20%; leasing fees are paid in equal share quarterly at the 1st day of the 1st month of each quarter.

1. The calculation of the average annual value of the property is shown in Table 3.6.

Table 3.6: Average annual value of the property (million tenge)

	VALUE OF THE PROPERTY AT THE BEGINNING OF THE YEAR	AMOUNT OF DEPRECIATION ALLOWANCES	VALUE OF THE PROPERTY AT THE END OF THE YEAR	AVERAGE ANNUAL VALUE OF THE PROPERTY
1-st year	360	36	324	342
2-nd year	324	7.2	288	306

The calculation of the total amount of lease payments by year is performed by the formula (3.1; 3.2):

1-st year.

D = 360,0 x 10 : 100 = 36 million tenge

P_c = 342 x 50 : 100 = 171 million tenge

P_{com} = 342 x 12:100 = 41,04 million tenge

P_s = (7,5+2,5+ 10,0) : 2 = 10,0 million tenge

B = 36+ 171 + 41,04 + 10,0 = 258,04 million tenge

VAT_p =258,04 x 20: 100 = 51,608 million tenge

L_{tp1} = 36+ 171 + 41,04 + 10,0 + 51,608 = 61,9296 million tenge

2-nd year

D = 360,0 x 10:100 = 36 million tenge

P_c = 306 x 50: 100 = 153 million tenge

P_{com} = 306 x12:100 = 36,72 million tenge

P_s = (7,5-5- 2,5 + 10,0) : 2 = 10,0 million tenge

B = 36 + 153 + 36,72 + 10,0 = 253,72 million tenge

VAT_p = 253,72 x 20: 100 = 47,144 million tenge

L_{tp2} = 36+ 153 + 36,72 + 10,0 + 47,144 = 283,164 million tenge.

The total amount of lease payments over the duration of the lease agreement:

L_{tp1}+ L_{tp2} = 309,648 + 283,164 = 592.812 million tenge.

The amount of the lease payments: 592,812: 2: 4 = 74.1015 million tenge.

2. Schedule of payment of lease payments is presented in Table 3.7:

Table 3.7: Lease payments for each year (million tenge)

DATE	AMOUNT, MILLIONS TG.
01.01.2004	74.1015
01.01. 2005	74.1015
01.01. 2006	74.1015
01.01. 2007	74.1015
01.01. 2008	74.1015
01.01. 2009	74.1015
01.01. 2010	74.1015
01.01. 2011	74.1015

3. Composition of costs of the lessee in table 3.8:

Table 3.8: Composition of costs of the lessee (million tenge)

	Amount, million tenge	%
1. Depreciation allowances (compensation of value of the property)	72	12.15
2. Payment of interest on loan	324	54.66
3. Commission	77.76	13.12
4. Payment for additional services	20.0	3.38
5. Value added tax	98.752	16.69
TOTAL	592.812	100.0

3.12.2. Calculation of lease payments under finance leasing agreement with complete depreciation

Terms of the agreement:

Value of the property - the subject of the agreement - 800,0 million tenge. Term of agreement - 10 years;

The rate of depreciation allowances for a full recovery 10% per annum;

The interest rate on loans used by the lessor for purchase of property, - 40% per annum; the value of used credit resources - 800 million tenge;

Percentage of commission to the lessor - 10% per annum;

Additional services of the lessor: travel expenses 72 million tenge; consulting services – 10,0 million tenge; - 2.5 million tenge; personnel training - 20.0 million tenge.

Value-added tax rate - 20%;

Leasing fees are paid in equal share quarterly from the 1st year.

1. The calculation of the average annual value of the property is shown in Table 3.9:

Table 3.9: The calculation of the average annual value of the property (million tenge)

	VALUE OF THE PROPERTY AT THE BEGINNING OF THE YEAR	AMOUNT OF DEPRECIATION ALLOWANCES	VALUE OF THE PROPERTY AT THE END OF THE YEAR	AVERAGE ANNUAL VALUE OF THE PROPERTY
1-st year	800,0	80.0	720,0	760,0
2-nd year	720,0	80,0	640.0	680,0
3-rd year	640,0	80,0	560,0	600,0
4-th year	560,0	80,0	480,0	520,0
5-th year	480,0	80,0	400,0	440,0
6-th year	400,0	80,0	320,0	360.0
7-th year	320,0	80,0	240,0	280,0
8-th year	240,0	80,0	160,0	200,0
9-th year	160,0	80,0	80,0	120.0
10-th year	80,0	80,0	0	40.0

The calculation of the total amount of lease payments

1-st year.

D = 800,0 x 10 : 100 = 80,0 million tenge

P_c= 760,0 x 40 : 100 = 304 million tenge

P_{com} = 760,0 x 10: 100 = 76 million tenge

P_s = (18,0 + 10,0 + 20,0) : 10 = 4.8 million tenge

B = 80,0 + 304 + 76 + 4,8 = 464.8 million tenge

VAT_p = 464,8 x 20 : 100 = 92,96 million tenge

L_{tp1} = 80,0+304+76+4,8+ 92,96 = 557,76 million tenge

2-nd year

D= 800,0 x 10:100 = 80,0 million tenge

P_c = 680,0 x 40 : 100 = 272 million tenge

P_{com} = 680,0 x 10:100 = 68 million tenge

P_s = (18,0 + 10,0 + 20,0) : 10 = 4,8 million tenge

B = 80,0+ 272 + 68 + 4,8 = 424,8 million tenge

VAT_p = 424,8 x 20 : 100 = 84,96 million tenge

L_{tp2} = 80,0+ 272,0 + 68,0 + 4,8 + 84,96 = 509,76 million tenge.

In the same sequence, calculations for the 3-10th years are performed.

2. The calculation results are summarized in Table 3.10.

Table 3.10: The calculation results (million tenge)

YEAR	D	P_c	P_{com}	P_s	B	VAT_p	L_{tp}
1	80,0	304,0	76,0	4,8	464,8	92,96	557.76
2	80,0	272,0	68,0	4,8	424,8	84,96	509.76
3	80,0	240,0	60,0	4,8	399,8	76,96	461.76
4	80,0	208,0	52,0	4,8	344,8	68,96	413.76
5	80,0	176,0	44,0	4,8	304,8	60,96	365.76
6	80,0	144,0	36,0	4,8	264,8	52,96	317.76
7	80,0	112,0	28,0	4,8	224,8	44,96	267.76
8	80,0	80,0	20,0	4,8	184,8	36,96	221.76
9	80,0	48,0	12,0	4,8	144,8	28,96	173.76
10	80,0	16,0	4,0	4,8	104,8	20,96	125.76
Total	800,0	1600,0	400,0	48,0	2848,0	569,6	3417.6
B %	23.4	46.82	11.71	1.4	—	16,67	100,0

The amount of lease payments: 3417,6 : 10 = 341,76 million tenge

3. Schedule of payment of lease payments is presented in Table 3.11:

Table 3.11: Payment of lease payments for each year (million tenge)

DATE	AMOUNT, MILLIONS TG.
01.07.2002	341,76
01.07.2003	341,76
01.07.2004	341,76
01.07.2005	341,76
01.07.2006	341,76
01.07.2007	341,76
01.07.2008	341,76
01.07.2009	341,76
01.07.2010	341,76
01.07.2011	341,76

3.12.3. Calculation of lease payments under financial leasing agreement with the payment of an advance and the application of the accelerated depreciation mechanism

Terms of the agreement:

Value of the property - the subject of the agreement - 800,0 million tenge.

Term of agreement - 5 years;

Accelerated depreciation mechanism applies with a factor of 2, the Lessor received a loan in the amount of 800 million tenge at 20% per annum;

Percentage of commission to the lessor - 10% per annum;

Additional services of the lessor provided by the lease agreement, total - 40.0 million tenge, including: Lessee shall pay to the lessor an advance in the amount of 400.0 million tenge at the conclusions of the agreement;

Leasing fees are paid in equal share monthly at the 1st day of the 1st month.

1. The calculation of the average annual value of the property is shown in Table 3.12.

Table 3.12: The average annual value of the property (million tenge)

	VALUE OF THE PROPERTY AT THE BEGINNING OF THE YEAR	AMOUNT OF DEPRECIATION ALLOWANCES	VALUE OF THE PROPERTY AT THE END OF THE YEAR	ANNUAL VALUE OF THE PROPERTY
1-st year	800,0	160,0	640,0	720,0
2-nd year	640,0	160,0	480,0	560,0
3-rd year	480,0	160,0	320,0	400,0
4-th year	320,0	160,0	160,0	240,0
5-th year	160,0	160,0	0,0	80,0

2. The calculation of the total amount of lease payment, the calculation results are summarized in Table 3.13.

Table 3.13: The total amount of lease payment (million tenge)

YEARS	D	P_c	P_{com}	P_s	B	VAT_p	L_{tp}
1	160,0	144,0	72,0	8,0	384,0	76,8	460,8
2	160,0	128,0	64,0	8,0	360,0	72,0	432,0
3	160,0	96,0	48,0	8,0	312,0	62,4	374,4
4	160,0	64,0	32,0	8,0	264,0	52,8	316,8
5	160,0	32,0	16,0	8,0	216,0	43,2	259,2
Total	800,0	464,0	232,0	40,0	1536,0	307,2	1843,2
B %	43.4	25,16	19,58	2.16		16.7	100,0

Total amount of lease payment L_{tp} = 1843.2 million tenge.

Total amount of lease payment less the advance: L_{tp} = 1843.2 - 400 = 1443.2 million tenge. Amount of payment equal to 1443.2/5=288.64 million tenge.

3. Schedule of payment of lease payments is presented in Table 3.14.

Table 3.14: Payment of lease payments for each year (million tenge)

DATE	AMOUNT OF PAYMENT, MILLION TG
01.01.2006	288,64
01.01.2007	288,64
01.01.2008	288,64
01.01.2009	288,64
01.01.2010	288,64
01.01.2011	288,64

3.12.4. Calculation of lease payments under financial leasing agreement granting ~~to~~ the lessee the right to purchase the property

Terms of the agreement:

Value of the property - the subject of the agreement - 800,0 million tenge.

Term of agreement - 6 years;

The rate of depreciation allowances for a full recovery - 10% per annum;

The interest rate on loans used by the lessor for purchase of property, - 20% per annum;

Percentage of commission - 12% per annum;

Additional services of the lessor, total - 21.0 million tenge:

Value-added tax rate - 20%;

The lessee has the right to redeem the property upon the expiry of the agreement on the residual value.

Leasing fees are paid in equal share quarterly from the 1st year.

1. The calculation of the average annual value of the property is shown in Table 3.15.

Table 3.15: The average annual value of the property (million tenge)

	VALUE OF THE PROPERTY AT THE BEGINNING OF THE YEAR	VALUE OF DEPRECIATION ALLOWANCES	VALUE OF THE PROPERTY AT THE END OF THE YEAR	AVERAGE ANNUAL VALUE OF THE PROPERTY
1-st year	800,0	80,0	720,0	760,0
2-nd year	720,0	80,0	640,0	680.0
3-rd year	640.0	80,0	560,0	600,0
4-th year	560,0	80,0	480,0	520,0
5-th year	480,0	80,0	400,0	440,0
6-th year	400,0	80,0	320,0	360,0

The residual value of the property $C = B_v - D = 800,0-6x\ 80,0 = 320,0$ million tenge.

$C = C_b$ or C_e are from formula 2.7, and B_v is from formula 2.5;

2. The calculation of the total amount of the lease payments are made in the same sequence as in the previous cases and are summarized in Table 3.17.

The calculation of the total size of the lease payments are made in the same sequence as in the previous cases and are summarized in Table 3.16.

Table 3.16: The total size of the lease payments (million tenge)

YEARS	D	P_c	P_{com}	P_s	B	VAT_p	L_{tp}
1	80,0	152,0	91,2	3,5	326,7	65,34	392,04
2	80,0	136,0	81,6	3,5	301,1	60,22	361,32
3	80,0	120,0	72,0	3,5	275,5	55,1	330,6
4	80,0	104,0	62,4	3,5	249,9	49,8	299,88
5	80,0	88,0	52,8	3,5	224,3	44,86	269,16
6	80,0	72,0	43,2	3,5	198,7	39,74	238,44
Total	480,0	672,0	403,2	21,0	1576,2	315,24	1891,44
B %	25,38	35,53	21.32	1,1		16,67	100,0

The total amount of lease payments - 1891,44 million tenge. The amount of the lease payments: 1891,44 : 6 = 315,24 million tenge.

3. Schedule of payment of lease payments is presented in Table 3.17.

Table 3.17: Payment of lease payments for each year (million tenge)

DATE	AMOUNT OF PAYMENT, MILLION TG
01.01.2006 advance	315,24
01.01.2007	315,24
01.01.2008	315,24
01.01.2009	315,24
01.01.2010	315,24
01.01.2011	315,24
SUM	1891,44

The agreement may provide for redemption of the property at residual value of property with execution of the contract of sale.

CHAPTER 4: ANALYSIS OF RESEARCH FINDINGS

4.1 Leasing, credit or direct purchase

The aim of this thesis is to make a comparative analysis of leasing, credit and direct purchase for construction companies in Kazakhstan. The review of related literature has shown that there hasn't been made any comparison of these 3 ways of property acquisition for the construction companies in Kazakhstan. The comparative analysis and recommendations provided in this thesis are expected to help construction companies in selecting the most appropriate and profitable option and finding the most efficient way of buying the necessary equipment.

For this purpose, leasing, credit and direct purchase have been analyzed and advantages and disadvantages of these ways for construction companies and other participants are identified. In order to achieve the above-mentioned aim, several methods including analysis, classification and systematization have been adopted.

The information was gathered directly from banks representatives, owners of the construction companies and leasing companies through interviews. The interview questions are provided below. In the light of information gathered in the first phase, interviews were prepared and conducted with 4 executives from 4 different construction companies. These are:

1. Procentov V. Executive of LLP "Firm Avtodorservis"

-The general contractor, managing construction projects, providing materials, equipment, etc.

2. Platonov N. Executive of LLP "Aysu Milioratsiya"

-Infrastructure construction, construction of embankments, preparing the territory for the beginning of construction, work with the land.

3. Hasanov G. Executive of LLP "DSK Group"

-Infrastructure construction, drainage pipes, bus stops, installation of road signs.

4. Savinov S. Executive of LLP "ADSTK"

-Working with the lower layers of the foundation, working with asphalt, application of road marking lines on the road surface.

The list of questions used in the interview is provided below:

1. Can you compare the current interests rates applied for different mechanisms of equipment provision? In your opinion, which mechanism is more adventageous for construction companies in terms of interest rates; leasing, credit or direct purchase?
2. How much does it cost to insure equipment in leasing, in credit and in direct purchase? Who is responsible for paying insurance for equipment? Overall, which mechanism is more convenient in terms of insurance?
3. Can you compare the taxes applied for different mechanisms of equipment provision? Who is responsible for paying the tax on equipment?
4. How much time is needed for completing the deal in the three mechanisms?
5. What can you say about the amortization periods for the equipment in leasing, credit and direct purchase?
6. In which methods accelerated depreciation is applied? How is this adventageous for construction firms?
7. Can you compare the current VAT applied for different mechanisms of equipment provision? In your opinion, which mechanism is more adventageous for construction companies in terms of VAT; leasing, credit or direct purchase?
8. What kind of guarantees are required by leasing companies or banks in equipment provision?
9. In which methods of equipment provision, the equipment is reflected on the balance sheets of construction companies?

Furthermore, banks and leasing companies were visited in order to gather data on leasing, credit and direct purchase applications. These include the Halyk Bank, Halyk-Leasing, Leasing Group Inc., Astana Motors Leasing and "Astana Finance".

On the basis of the data gathered from literature review and interviews, a comparison table has been formed (Table 4.1). The main features that should be taken into consideration when choosing the most appropriate way of property acquisition according to profit, schedule times and other meaningful factors were identified and listed. Then a discussion on the best option of equipment provision is provided for each factor in the comparison table.

Table 4.1: The basic differences between leasing, credit and direct purchase.

Name	Leasing	Credit	Direct purchase
Interest rate	5-14%	12-18%	0%
Insurance	Included in the price (reduced rate of 5-7%)	7-10%	7-10%
Party that pays for the insurance	Leasing company	Construction company	Construction company
Property tax	Included in the price (reduced rate 1.1%)	2,2%	2,2%
Party that pays for the property tax	Leasing company	Construction company	Construction company
Transaction processing term	3-14 days	1-3 months	1-3 days
Amortization period	25-30 months	74-90 months	74-90 months
Ratio of accelerated depreciation	1,1 - 3	No	No
Residual cost, as a percentage of initial value	0%	66%	66%
VAT amount and its refund	VAT of the total amount of the leasing contract	VAT on the cost of equipment, VAT on interest paid on the loan is not reimbursed	VAT on the cost of equipment
Guarantees	Advance 10-30%	Assets having a value that exceed the amount of the loan by 1.5-2 times	No
Reflection in the balance sheet	Not Reflected	Reflected	Reflected

4.1.1 Interest rate

The interest rates for direct purchase is 0%, for leasing is 5-14% and for bank credit is 12-18%. Borrowing money from the bank requires that the principal and interests are paid back. Bank interest in this case is about 12-18% per year. Interest rate depends on the experience of the construction company, period of loan and default risk; therefore it can be different in each case. Construction company buying the equipment on credit becomes its owner, but the bank demands a credit support, and the equipment or real estate can become this guarantee. The bank needs this guarantee to be sure that the money will be given back.

Borrowing money from the leasing company for buying necessary equipment also means that the whole sum and the interest should be paid back. Interest rate for the use of money in this case is around 5-14% per year, depending on the risk level of the

leasing company, equipment cost, on extra services provided by the leasing company to the customer and on the term of loan.

As far as the interest rate factor is concerned, when choosing between these ways of borrowing money, one will prefer to acquire equipment with the help of a leasing company as the cost for using the money, ie. interest rate is lower than in a bank. Besides, leasing companies provide optional services. This attracts both big companies and starting construction firms. Platonov (2011) also considers that equipment acquisition from a leasing company is more economically advantageous than a bank credit. Of course, direct purchase prevents overpayment, but a great sum of money has to be paid at once. The construction company can spend available resources for the necessary equipment, but it also could invest this money in business development. Money spent on the equipment can be spent on a bigger amount of needs and it will increase work and the benefit of the construction company.

When equipment is bought by using own resources, no interest for using the money has to be paid. If a construction company has enough money, it's more profitable to buy the equipment using own resources. Thus the construction company becomes the owner of the equipment; there is no need for the use of a bank's money, pay interest or provide a collateral to a bank or a leasing company. Therefore, direct purchase is definitely more cost efficient.

4.1.2 Insurance

Savinov (2011) points out that work in the construction is connected with risks and accidents. Very often the machines working at the construction break down, crash and get damaged. That's why they should be insured. The equipment by using own resources, the owner insures it on general grounds, that is about 7-10% of the equipment cost. This percentage depends on the equipment cost and the way of using. There is no discount for the companies that buy equipment with their own money, and they go through the process of getting insurance on their own. Also when acquiring the equipment on credit, the owner gets the insurance himself, spends his own money and time. As the credit provided by the bank is only for the purchase necessary equipment, the customer spends extra money on the insurance without any discount. Moreover, the

acquired equipment can be in pledge at the bank as a guarantee that the money will be returned.

The government supports leasing development and has decreased the insurance cost for the equipment acquired on leasing, so that it is 5-7% of the equipment cost. But the leasing company includes these expenses into the monthly payments, that the customer makes.

As can be seen from the above, leasing is the most profitable way of equipment acquisition in the context of insurance. Equipment acquired on credit or construction company's own money becomes the property of the construction company, so the construction company insures it by its own means, and it takes plenty of time. When it goes through leasing, the leasing company becomes the owner and pays for the insurance. And the construction company using the necessary equipment pays a limited amount of money that includes the cost of insurance. This makes the work of the constructing company easier.

4.1.3 Property tax

The owner should pay a property tax that runs at 2.2% of the cost of the equipment bought. Purchasing the equipment on credit, the construction company also becomes the owner of the property and, therefore, it must also pay property tax in the amount of 2.2% of the equipment cost. There's no discount on the property tax for the equipment acquired on credit.

Construction companies that use leasing to buy necessary equipment don't pay this tax. The acquired equipment is on the balance sheet of the leasing company, and the leasing company pays the property tax as far as construction company is only the tenant. Since the government supports the development of leasing in the country, the tax rate on equipment for leasing companies has been reduced. This rate is 1,1% of the value of purchased equipment. As the leasing company pays the property tax for the equipment given on the lease, it includes the amount of property tax into the payments that the construction company makes.

So, the property tax is paid by the leasing company when it gives the equipment to the customer, whereas the direct purchase and credit necessitate that this tax is paid by the

construction company that acquires this equipment and it is 2.2% of the cost. Leasing also has got an advantage here.

The interviewee Hasanov (2011) underlines that tax payments are very important in the management of a construction company and states that "our construction company as a tenant pays the lease payments, the value of which already includes the cost of the tax paid on the property". One can not postpone or forget about it, as it can cause heavy fines. Purchasing the necessary equipment on leasing, it becomes the property of the leasing company, and the leasing company pays the property tax 1.1% of the equipment cost. Therefore for a construction company, it is a cheaper solution than purchasing or credit where the equipment is reported on the balance sheet of the construction company.

4.1.4 Transaction processing term

In purchasing the equipment using a credit, a construction company has to collect a lot of documents and permits that confirm the construction company’s solvency such as certificates of income, absence of debts, etc. After collecting and passing all the necessary documents to the bank, the construction company waits for an answer, the bank's decision. The bank, after having evaluated all the documents and calculated the risk of the credit, decides whether the construction company will be granted the credit. The bank determines the interest rate taking into account the risks and the cost of the equipment.

The credit process can take 1-3 months from the moment of application till disbursal. However in some cases, after 3 months of deliberation, the bank may turn down the application for credit of a construction company, without explaining the reasons of the refusal. This is a risk for a construction company which expects to receive the requested amount of money for acquiring necessary equipment. This can affect the work of the construction company that needs money for a new, necessary equipment for construction work.

Construction companies wishing to purchase the necessary equipment on leasing need to collect the necessary documents for the leasing company. They need to find the right equipment for the works and the seller who agrees to work with leasing company.

Leasing companies, in order to meet the needs of prospective lesees, accelerate the process of evaluating the documents which are fewer than those required in the banks. The whole process from application to the leasing company to getting the equipment takes 3-14 days. This is much faster than taking a bank credit, but still, it is slower than to purchase the necessary equipment with own resources, in direct purchase. Of course, if a construction company does not have enough money for purchasing the equipment but needs to get the necessary equipment and start construction work, then the most suitable decision is to contact the leasing company.

If the construction company has, the necessary funds for the purchase of equipment, then the whole process from the application to the start of equipment use can take no more than 1-3 days. Of course, the duration largely depends on the availability of the necessary equipment from the seller and the required amount of money from the construction company for the purchase of equipment, registration, insurance, taxes and other costs associated with the purchase and registration.

In summary, the period of the transaction at leasing is 3-14 days, bank loan is 1-3 month, while the direct purchase is 1-3 days. Here direct purchase is the most adventageous option for a construction company.

4.1.5 Amortization period and ratio of accelerated depreciation

When the equipment is acquired on leasing, it is credited to the balance of the leasing company. Since the government supports the development of leasing in the country, it has reduced the period of depreciation. When a construction company purchases equipment on leasing, depreciation period is 25-30 months. Such a short period of depreciation was obtained due to the fact that the state is supporting the development of leasing, increased rate of accelerated depreciation for the equipment and property acquired through leasing. The coefficient of accelerated amortization for leasing is 1.1-3. This means that the purchased equipment will be depreciated 3 times faster. Accelerated depreciation of equipment allows the construction company to buy the equipment at net book value from leasing company, which is very cheap. Accelerated depreciation reduces taxes under the guise of wear and tear as the tax for an outdated and worn-out

equipment is less than for a new one. Depreciation and accelerated depreciation is beneficial for all participants of leasing process.

When a construction company purchases the necessary equipment using a credit, equipment goes to the balance sheet of the construction company. Since the construction company becomes the owner of the purchased equipment, the period of depreciation of the equipment is 74-90 months. The accelerated depreciation is not provided for the equipment purchased on credit. Construction company acquiring the necessary equipment on credit will use general conditions for the depreciation of the acquired equipment. There is no way to reduce the tax depreciation expense for construction companies who have purchased equipment with the credit.

By purchasing the necessary equipment with its own money, the construction company becomes the owner of the equipment. As in credit, depreciation takes place under general conditions. Depreciation period in this case is 74-90 months. For construction companies acquiring the necessary equipment with their own resources, the accelerated depreciation is not provided. This means that these companies can not reduce taxes through depreciation.

Depreciation period for a property taken on leasing is 25-30 months, while credit and purchase amortization period is 74-90 months. Leasing has an accelerated depreciation rate 1.1-3, while the loan and direct purchase don’t have accelerated depreciation. This is an advantage of leasing.

Savinov (2011) states that a construction company prefers to acquire the necessary equipment on leasing. Leasing transactions are usually made for a certain period that allows to write off the leased asset using accelerated depreciation. For example, if the equipment has a period of use from 7 to 10 years (from 84 to 120 months) accelerated depreciation with coefficient of 3 will help to write off it for 28 months, i.e., less than 3 years. At the end of the lease agreement and its residual, respectively, the redemption price will be minimal. Purchasing the equipment on credit or on direct purchase there is no accelerated depreciation, no tax cuts. "I prefer to work with leasing, for me and my company it is convenient, reliable and secure" - Savinov (2011).

4.1.6 Residual cost, as a percentage of initial value

Purchasing the equipment with leasing, a construction company has the ability to use accelerated depreciation rate (3) and absorb the full cost of the equipment over a short period of 25 months. This is 3 times faster than credit or direct purchase. After 25 months, a construction company can take the equipment from a leasing company for nominal (the initial value of the price) value, since it has fully amortized its acquisition value.

By purchasing the necessary equipment on credit, a construction company can not use accelerated depreciation rate (1,1-3) and therefore the equipment purchased on credit is amortized on general terms with an index of 1. Amortization period on credit is 74 months. This means that after 25 months of use, the equipment cost with accumulated savings deduction will be 66% of the original cost.

Similar to the case of credit, direct purchased equipment does not cover the ratio of accelerated depreciation (1,1-3). Depreciation rate of direct purchased equipment is 1. As the direct purchased equipment depreciation period equals to 74 months, after 25 months its residual value will be 66% of acquisition value.

Written down value including 25 months of depreciation on leasing is 0% of the residual value of the equipment and on a credit and direct purchase it is 66%. Therefore, as far as the residual value is concerned, leasing is the most adventageous option among all.

According to the interviewee Savinov (2011), if one construction company acquires equipment with leasing and another company on credit, then after 25 months the construction company that took advantage of leasing will become the owner of the equipment for nominal cost and that construction company which took equipment on credit continues to pay debt on a credit.

4.1.7 VAT amount and its refund

It is necessary to pay VAT in purchasing equipment. In using leasing for purchasing the necessary equipment, VAT on full amount of leasing agreement has to be paid. Leasing payment includes VAT, insurance, services and cost of the equipment. After the termination of the lease agreement, the entire amount of VAT paid by the construction company is paid back by Taxation Committee. Because the leasing payments are spread

out over the years, tax amount is small and considerably less than that paid at equipment purchase. Tax Code authorizes construction companies to claim the refund of the tax which is paid to leasing companies within leasing payments.

Construction companies must pay VAT on the cost of equipment, insurance and maintenance in purchasing the equipment on credit. Taking out a bank credit, a construction company must pay interest on the credit and VAT payment on the loan interest. State tax authorities return equipment value VAT, but they do not pay back VAT on loan interest.

In the direct purchase of equipment, VAT on the cost of equipment, insurance and maintenance have to be paid. Kazakhstan's tax authorities return only part of the VAT paid, in particular, equipment cost VAT.

At leasing, VAT is refunded from the total amount of leasing agreement; at credit, from the cost of equipment and VAT on interest paid on the credit is non-refundable; at direct purchase VAT is paid from budget of equipment cost. Therefore, leasing has got an advantage here.

Platonov (2011) believes that if a construction company is going to purchase equipment (direct purchase, credit, leasing), it should pay attention to the VAT refund taking into account that with leasing, all VAT expenses to be returned back to the construction company by the state.

4.1.8 Guarantees

If a construction company wants to purchase the necessary equipment with leasing, it needs to make an application to the leasing company and collect all the necessary documents. The leasing company takes a deposit amounting about 10-30% of the cost of leasing agreement from the construction company, in order to make sure that the company is seriously going to buy the equipment. The size of the advance payment and its percentage depends on the cost of purchased equipment and on how long construction company works in the construction market. After a construction company acquires the necessary equipment, the advance payment to the leasing company can be deducted from the leasing payments in the first months. Then for example, after 2-3 months the subsequent leasing payments start to be made regularly. Alternatively, the advance can

also be paid as part of the leasing payments. In this case, the construction company can start paying the leasing payments with an amount which is 10-30% less than the original amount. All depends on the negotiations between the leasing and the construction companies before signing a leasing contract.

If a construction company wants to buy equipment on credit, it should also collect all the necessary documents required by a bank. However, the bank needs assurance that the money taken out will be returned without any losses, plus the bank interest. Thus, in order to ensure the loan repayment, the bank takes collateral which should be 1.5-2 times higher than the amount borrowed. For example, if the construction company takes out a credit for $ 100,000 to purchase the necessary equipment, property(apartment, office, building) to be pledged should have a value of about $ 150,000 or an equipment of $ 200,000 worth. In case the construction company cannot repay the debt to the bank, the bank will retain the equipment or property that the construction company pledged as collateral. The collateral may be both old and new equipment purchased on credit and once the credit is fully repaid, it (real estate documents, equipment) is given back to the construction company.

If a construction company wants to buy equipment with direct purchase, it is unnecessary to provide a collateral, give a down payment or collect documents for real estate or equipment. Instead, by purchasing equipment with its own money, a construction company needs to have the full sum for the acquisition of the necessary equipment. The construction company just needs to find a seller of the equipment needed, pay him its full price or pay a part of the cost and after obtaining the equipment, repay the residual sum depending on the agreement with the seller and construction company.

In summary, it can be seen that the guarantee provided at leasing is 10-30% of the equipment cost, at credit, assets which should be worth 1.5-2 times the amount of the credit and at direct purchasing there is nothing to pay. Here the advantage is in direct purchasing.

The interviewee Platonov (2011) said: “Small equipment (computers, furniture, etc.) for my company I possess with direct purchase and expensive equipment, even if I have all the necessary sum, I get with leasing. This method helps to allocate expenses easier”.

4.1.9 Reflection in the balance sheet

Equipment acquired with leasing is considered to be the property of the leasing company and is shown in the balance sheet of the leasing company. As long as the construction company fully pays the leasing payments, the construction company is a tenant of that equipment. Thus leasing as opposed to credit, does not increase the company's debt and does not affect the attractiveness of the construction company for investors.

Use of the loan results in a significant increase in bills payable, which adversely affects the investment potential. The bank gives money to the construction company only for the equipment purchase. The purchased equipment is shown in the balance sheet of the construction company, the amount of principal and accrued interest are recorded in the financial statements of the construction company in full.

Purchased equipment with direct purchase is also credited to the balance sheet of the construction company and the company becomes the owner of the equipment. Equipment purchased with direct purchase positively impacts the company's investment.

If a construction company in the future will want to get that either a credit loan or a lease, it will be able to show that the equipment purchased with direct purchase, as a company's financial stability and the stability of the payments to the bank and it may be the guarantee return the borrowed money. But the direct purchase has its drawbacks, it is necessary to pay taxes on the equipment, the tax on income from the equipment, insurance, further upkeep .

Reflection on the balance sheet, leasing does not increase the company's debt, the credit increases payables. Among loans to benefit from leasing. Direct purchase does not increase the company's debt and positively shows the company's financial stability. Here advantage for leasing.

Procentov (2011) believes that the appearance of equipment in the company's balance sheet is useful when the company participates in tender as equipment in the balance sheet of construction company is considered as solvency firm, that has money to build.

By the end of leasing term, it is recommended to take acquired leasing equipment from the leasing company and credit it to the construction company's balance before it participates in tender.

4.2 Example

Let us consider an example on the comparison of the three methods for acquiring property. The price, quantity and depreciation of the property under consideration for the comparison of leasing, credit and direct purchase are shown in table 4.2:

Table 4.2: The quantity, price and depreciation for the property

Name	Quantity	Price without VAT	Price with VAT	Accelerated depreciation
Property	1	847 458	1 000 000	3,0

The terms and conditions of the agreement are shown in table 4.3.

Table 4.3: Terms and conditions of the agreement

Advance terms	20%	Frequency of payments, months	Monthly
Advance payment, tenge	200 000	Balance holder	Lessor
Loan rate, %	16%	Transport tax	Not accounted
Leasing term, month	24	Insurance	Not accounted
Leasing commission	2%	Additional expenses	Not accounted
Date of periodic payments	10	Customs clearance	Not accounted

Customer costs over the duration of the lease (24 months.) shown in table 4.4:

Table 4.4: Results of the example of comparison for leasing, credit and direct purchase

	Leasing	Credit	Purchase
Payments to the supplier (advance)	200000	200000	1000000
Lease payments	1029864	-	-
Property tax	2347	29985	29985
Transport tax	-	-	-
Loan repayment	-	800000	-
Interest repayment	-	135194	-
Insurance	-	-	-
Additional expenses	-	-	-
VAT refund	-187606	-152542	-152542
Income tax reduction	-250140	-107440	-74993
Expenses for loan term	792117	905198	802450

Expenses for loan term reflect the cash flows of the lessee to the end time of the leasing contract (24 months) for each of the variants under consideration. As it can be see from the calculation, the costs for 24 months in leasing are significantly lower than costs for loans, and than the costs of purchase using own funds.

CHAPTER 5 – CONCLUSIONS

The main purpose of this study was to uncover all the advantages and disadvantages of using credit, leasing and direct purchase in construction firms and to determine which meachanism should be preferred in acquiring the necessary equipment.

Firstly, the advantages and disadvantages of acquiring equipment through leasing, credit or direct purchase are examined. In order to make this comparison, previous studies regarding the comparisons between the three mechanisms were studied. Then, interviews were conducted with representatives of construction companies, banks, leasing companies.

As a result of this work, Table 4.1 was prepared in which 12 main points for the comparison of leasing, credit and direct purchasing were identified. It is not possible to state that the one criterion is more important than the others as all of these criteria are related to each other. All of the criteria in Table 4.1 are important for a construction company in choosing a method for the purchase of equipment.

The results of the interviews show that (Table 4.1) while 3 points are advantageous for direct purchase, 9 points are advantageous for leasing. From Table 4.1 it can be seen that the purchase of equipment using credit is not beneficial according to all criteria for the construction companies.

From Table 4.1, it can also be seen that leasing is more advantageous for the following criteria: insurance, property tax, amortization period and ratio of accelerated depreciation, residual cost, as a percentage of initial value, VAT amount and its refund. Direct purchase is more advantageous in terms of interest rate, transaction processing term, guarantees and reflection in the balance sheet. Based on the results of this study, the credit has no advantage at all. Therefore, the analysis reveals that with a construction company may purchase the equipment at once, using its own money, but it's better to take advantage of leasing; without having the entire amount for the purchase of equipment.

One of the main objectives of this research was to reveal the the advantages and disadvantages of the three mechanisms. The results in this respect are provided below.

Advantages of leasing are:

- availability,
- low interest rates,
- low cost of the insurance and of the tax,
- short duration required for preparing of the documents,
- fast provision of the desired equipment followed by equipment service,
- accelerated depreciation,
- short amortization period,
- lease payments do not appear on balance sheet.

Disadvantages of leasing are:

- construction company does not own the equipment,
- Lessee has to use equipment in accordance with the recommendations and technical instructions of the Supplier, to keep it in good working order, to make the needed maintenance, repairs and all this at his own expense,
- All the risks arising from the operation process of the equipment and associated with the destruction, loss, premature wear, damage or injury, regardless of the damage, are assumed by the Lessee.

Advantages of credit are:

- early repayment of debt to the bank,
- construction company gets money and can use them as needed.

Disadvantages of credit are:

- large interest rate,
- the high cost of insurance,
- the high cost of tax,
- absence of accelerated depreciation,
- long amortization period,
- construction companies need to collect a lot of documents for banks, to wait a long time for getting the money needed and there is a risk that the bank will not give the credit,
- value of collateral must exceed the cost of the equipment in 2 times,
- reflected on the balance sheet.

Advantages of direct purchasing are:

- no debt after the purchase because of there is no interest rate,
- a very short period of acquisition of equipment,
- no advance payment,

- construction company is the owner of the equipment.

Disadvantages of direct purchasing are:

- the high cost of insurance,
- the high cost of tax,
- absence of accelerated depreciation,
- long amortization period ,
- reflected on the balance sheet.

Comparing leasing, credit and purchase one can come to the conclusion that it is cheaper to acquire property in leasing than by credit or purchasing. Indeed, to make a profit on the new equipment, cars, machinery, it is not necessary to be the owner, as long as one has the right to use them. Leasing seem to be a good way to reconcile the interests of producers and consumers. The presence of well thought-out contractual relationship, backed by advance payments may allow the provider to clearly plan their work, to link results with subsequent cash receipts from customers. There may, of course be moments when it is advisable to purchase the equipment using own money. However,without having the entire amount of money, it appears that it is better to take advantage of the leasing mechanism, rather than credit.

The results of this research may be useful for those construction companies and other enterprises wishing to purchase equipment, but have not yet decided how. Further benefits may also be accrued from choosing a convenient, profitable and low-cost method of acquiring equipment. Overall, this model of comparison of 3 methods of the purchasing equipment: leasing, credit and direct purchase, can help Kazakhstan’s construction companies in calculating cost benefits, making the right and most profitable choice in the search for the most efficient way of buying the necessary equipment.

Lastly, it should be noted that, in the absence of adequate knowledge about leasing, it is better not to take risks and seek professional support. In this concept, contacting specialized leasing departments of enterprises that are able to provide expert advice on the establishment and practice of leasing mechanisms.

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RESUME

My name is Konstantin OSTAPCHUK. I'm citizenship of the Republic of Kazakhstan. I was born on 4th January in 1986. My nationality is Russian.

Details of my education and work experience are below:

Education: 1999-2004 Kazakh-Turkish High school in Astana city; 2004-2008 Eskisehir Osmangazi University, Bachelor in Civil Engineering department; 2010-2013 Mimar Sinan Fine Arts University Programme in Institute of Science and Techbology on Construction Project Management.

Work experience: 2008-2011 Road construction company LLP “Autodorservis” Project Manager of road construction project.

Functional authority: 2008-2010 project of road construction length 200 km: 2010-2011 project of road construction length 50 km.

Mimar Sinan Fine Arts University's Programme of Construction Project Management gives me a lot of opportunity in my career, especially I use the knowledge that I had obtained from there for managing projects in the stage of constructions.