

# Option in House Lease Contracts

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## Abstract

Existence of high uncertainty in economic fields and consequently need to efficient tools for covering risk resulted from these uncertainties is evident for everybody. One of the economical fields of our country which necessitate these tools is real estate and particularly leasing. Traditional contracts which are currently used are not satisfying the current needs and conditions any more. There are many tools which can develop them according to the landlords and tenants' needs. At first, the expressions for options are described in this research. Then, the option and its role in land leasing contracts is discussed. Finally, the approaches for valuation of option of leasing contract are presented which is confirmed in Iran in addition to the validity of the model.

**Keywords:** Option, lease papers, purchase option, renewal option, cancelation option, valuation.

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## Introduction

Housing is one the active and effective sectors in economics of any country since it is a fundamental needs of human in addition to food and security. It is possible through two methods of land purchasing or leasing. Generally, leasing against purchase is a tool for risk coverage and those who do not afford to buy house satisfy their needs by leasing. This is the reason for which the leasing market is important and governments try hard to control it. One of the issues which is available in leasing sector of housing in Iran is false increase of prices in the transfer season which will be introduced for the purpose of that problem.

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It is known that leasing plays a significant role in economy. Although, in ancient civilizations the leasing consisted of using Agricultural tools, land, livestock and ships but the modern rents we know today date back to around 1900 and have covered a wide range of financial assets since the mid-twentieth century. Lease is a flexible instrument in financing the asset against purchase. In the last two decades, rent has entered various sectors (transportation, computers, real estate). As uncertainties increase, the risk of renting a property escalates and the demand for flexible and professional contracts is increasing. Traditional leases with inflexible terms no longer meet the needs. Risk is part of investing and risk management plays an important role in investment decisions (Latifi Benmaran, 2018). Assuming the market is efficient, there are tradable securities for all future probabilities and therefore all risk can be covered through efficient markets. In recent decades, derivative tools have been the focus of many researchers and scholars in various fields of finance and business. These tools have worked well to meet the mostly complex needs of the markets and have been able to cover many of the risks posed by uncertainties. Options in leases can also be considered as a derivative of real estate leases and a means of managing risk in real estate leases (Zargari et al., 2019). A limited and specific period of time for transfers in the housing rental sector causes unrealistic prices in this period of time, so that the prices in this period of time show a leap compared to the periods before and after that. Major factors are influencing this price increase, including the high density of "rental market referrals" and "new contracts". This study intends to introduce and evaluate a suitable option contract for housing rental contracts by influencing these two factors. A tool that can reduce these two factors or at least distribute them among other months of the year, to prevent a false increase in prices between August and September. This study, in addition to introducing different types of transaction options in the housing rental sector, will also introduce desirable valuation models in Iran (Haghdust, 2020).

### **Expressions of the research**

**Lease:** It is a contract under which the lessee becomes the owner of the same lessee's interests for a certain period of time in return for the property paid by the lessor.

**Option:** In general, the option of option can be divided into two categories: "purchase option" and "sale option". The option to purchase actually gives the holder the option (not the obligation) to buy the contracted property at a certain price and on a specific date. Similarly, a sale option gives the holder the option to sell the contracted property at a specified price on or before the specified date. The price stated in the contract is called the "agreed price" or "transaction price" and the date mentioned in the contract is called the "expiration date" or "maturity of the option" (Alipur et al., 2014).

**Real option:** If at the disposal of the transaction, the underlying asset is something other than financial assets, we are dealing with real discretion. These powers can be defined for research and development projects, exploration and exploitation of mines, and lease agreements (Pendar et al., 2020).

**Cancellation Option:** According to this contract, the authorized option holder (tenant / owner) has the option to terminate the contract with predetermined conditions and within a certain period of time (Izadifard, 2005).

**Upward - only Rental Reviews:** Under this agreement, the landlord can increase the rent at a certain time according to the agreement made (Haghdust, 2020).

**Renewal option:** In this Option the landlord / tenant has the option to extend the lease for another period at the agreed rental rate (Izadifard, 2005).

**Purchase option:** In this type of option, the tenant has the option to buy the property at the end of the lease term (Haghdust, 2020).

## Real Option

In recent decades, derivative tools have been the focus of many researchers and practitioners in various fields of finance and business. These tools have worked well to meet the mostly complex needs of the markets and have been able to cover many of the risks posed by uncertainties. Options can also be used as a derivative and a means of managing risk in a variety of real-world events (Alipur et al., 2014).

### *Real option Vs financial option*

Real option is the option to make a strategic investment decision related to a real or tangible asset (Amram and Kulatilaka, 2019). A financial option, such as option on shares, includes the option (not the obligation) to carry out an operation (purchase or sale) within a specified period and under specified conditions. This option can in fact be applied to construction projects, exploration, exploitation of oil fields, research and development projects, housing sector and all areas that are somehow affected by the existence of uncertainty in their processes (Rafati et al., 2012). Table 1. provides a comprehensive summary of the differences between real and financial option.

Invoice	Real option	Financial option
Basic asset	Real and tangible asset	Financial asset such as shares
Due date	Long term	Short term
Frequency	Exclusive to an asset / buyer at the time of the initial transaction	Negotiable in standard form / multiple buyer
Impact	Affecting the activity and value of the company	Affectless
Variable	More than one variable affecting the value	Price of share
Type	Different and complex types / difficult to identify	Easy to identify
Return	Possibility of mutual profit	One side gains and the other loses

Source: (Rafati et al., 2012)

### *Real option in housing leases*

In the business world, real option is found in all industries such as the discovery and exploitation of natural resources, real estate, power plants, paper production, research and development projects, airlines, shipping, and so on. In real estate lease contracts, option contracts can be used in all aspects of this section (Latifi Benmaran, 2018).

In real estate leases, options have been increasingly used to have the necessary flexibility to deal with uncertainties and to cover the risks involved. Real estate rental markets are considered as incomplete markets due to transaction costs, private risks, asymmetric information and business issues and can not be considered as securities markets (Pendar et al., 2020).

There are no real estate rental markets and contracts are not easily traded in a short period of time. Because of these characteristics, rental market markets are more risky than other markets. Traditional leases with longer lifespan and sometimes inflexible conditions are no longer able to meet the needs and manage certainty. The options issued on housing leases as a derivative of real estate leases have a similar function to financial options and can cover the risk in contracts (Rafati et al., 2012). Therefore, different types of options such as renewal option, cancellation option and development option have been widely used to meet different needs and manage the related risks in lease agreements.

### *Real option is a tool for hedging*

With increasing uncertainty, the risk of renting a property has increased, and so has the demand for flexible and professional contracts. Traditional rents with inflexible terms no longer meet the needs. Risk is part of investing and risk management plays an important role in investment decisions. Most financial instruments are designed for risk management, especially options such as extension options, cancellation options, purchase options, which play an important role in real estate operations (Pendar et al., 2020). Leasing, as a structured structure, is a way of allocating risk, because leasing involves a portion of the property options to use the asset and therefore involves less capital and risk than buying it, while leasing options are a tool for managing the risk involved in rental transactions. The housing rental market, unlike the financial markets, has low liquidity, so they will have more risk for the parties, so we need more appropriate tools to manage their risk (Alipur et al., 2014).

### **Options issued on housing lease contracts**

Extensive changes in financial transactions and the growth of uncertainties in today's economy have led to more leasing contracts taking advantage of possible terms, especially options that make them flexible in the face of possible changes. Therefore, identifying and valuing these options is important and necessary. In real estate leases, options have been increasingly used to have the necessary flexibility to deal with uncertainties and to cover the risks involved (Haghdust, 2020). Among the options that are more common in lease agreements, we can mention the option of renewing the lease, the option of buying the leased property and the option of canceling the lease (Gibson, and Lizieri 1999; Wacan and Pretorius. 2015; Smith and Posner, 2009). There are other types of options to

suit market conditions in the lease, such as the option to revise the rent for landlord, the option to expand the lease space, the option of precedence in the breach of contract and the option to relocate the tenant (Gibson, and Lizieri 1999; Hendershot and French, 2018; Brueggeman and Fisher, 2017) and Complex options such as sub-rental profit sharing (Smith and Posner, 2009).

A number of good studies have focused on one or more selected options, such as contract cancellation options (Copeland and Weston, 2012), Renewal or cancellation option, renewal or purchase option (Booth et al., 2011) and the option to breach the contract (Sing and Tang, 2014). In the case of pricing for termination of the contract, Hendershot and French (2018) briefly refers to the tenant's option to terminate the contract by taking to account different possibilities and scenarios. Additionally, Sing (2018) introduces purchasing options, stop costs, cancellation options and contract modifications

Some studies on lease options are more applicable in certain situations, such as rent increases and termination conditions in the UK (Booth et al., 2011 and Baum, 2012). Some research has only looked at certain categories of options, such as contract renewal options. (Schallheim, 2013) has analyzed three types of renewal / purchase options in terms of contract price: renewal / purchase option in terms of market value, in terms of a percentage of the maturity price, and at a discounted price in terms of some indicators such as consumption index.

In addition, studies such as Smith and Posner (2009) and Gibson and Lizieri (1999) have analyzed possible claims that are implicitly considered to be authority. These types of options include development option, construction option of priority, development option, purchase option, priority option in purchase agreement, landlord-option to move the tenant, option to renew the contract, tenant option to terminate the contract and increase They are gradually being rented out. Few studies have analyzed the actual option of commercial leases. Smith and Posner, (2009) are pioneers in this regard and have studied many factors such as reducing taxes and production costs, increasing net rental rates due to failure to increase customer price index, stopping tax and production costs, renting to non-participating profits. Although the research of Smith and Posner (2009) can be considered as the first reference in Lease contracts, but the lack of a comprehensive classification in it is noticeable. Other researchers who have introduced different types of options can be referred to Hendershot and French (2019). Although the study does not focus on the analysis of various options, it claims to improve competitiveness in the UK rental market. Jingwang and Pretorius (2018) divided the lease option into three general categories: lease-related option, term-related option, and contract-based option. Table 2. summarizes the features of this category.

Table 2. Options issued on housing lease contracts

Researches	Option holder		Option type	Statements					
Gibson and Lizieri (1999)	Tenant	Landlord	C	At the price of future rent	Rise in rent	Implicit option	Lease option		
Booths et al. (2011)		☑	C	Ratio of increase in consumption index					
Ambrose (2012)		☑	C	With a high limit					
Baum (2013)		☑	C	At the price of future rent / unlimited	Option for Renewal of the contract	Real option	Term-related option		
Smith (2009)	☑		C	At the price of future rent / limited					
Hendershot (2018)	☑		C	At a fixed price					
Smith. and Posnor (2009)	☑		C	A certain percentage of the future value of the property					
	☑		C	According the rent index					
Sing (2018)	☑		C	Checkout option for landlord	Option for contract termination/cancelation				
		☑	P	Checkout option for tenant					
Brugman.and Fischer (2017)	☑		C	Tenant's option to relocate	Option for relocation	Real option	Option related to principles of contract		
		☑	P	Landlord's option to relocate					
Gibson and Lizieri (1999)	☑		C	At the price of future rent / unlimited	Option for extending the lease				
	☑		C	At the price of future rent / limited					

Researches	Option holder		Option type	Statements			
	<input checked="" type="checkbox"/>		C	At a fixed price			
	<input checked="" type="checkbox"/>		P	Option for terminating a contract			
Wacan, and Pretorius (2015)	<input checked="" type="checkbox"/>		C	At a future price	Purchase option		
	<input checked="" type="checkbox"/>		C	At a future limited price			
	<input checked="" type="checkbox"/>		C	At a fixed price			
	<input checked="" type="checkbox"/>		C	A certain percentage of future value or a certain index			
Smith and Posnor (2009)	<input checked="" type="checkbox"/>		C	Marginal rent		Implicit option	
		<input checked="" type="checkbox"/>	C	Participation in marginal profits			
Ambrose (2012)	<input checked="" type="checkbox"/>		P	At a future price	The tenant’s option of precedence in refusing development		
Astin (2010)	<input checked="" type="checkbox"/>		P	At a future limited price			
	<input checked="" type="checkbox"/>		P	At a fixed price			
Gibson and Lizieri (1999)	<input checked="" type="checkbox"/>		P	At a future price	The tenant’s option of precedence in refusing purchase		
	<input checked="" type="checkbox"/>		P	At a future limited price			
	<input checked="" type="checkbox"/>		P	At a fixed price			
	<input checked="" type="checkbox"/>		P	A certain percentage of future value or a certain index			

### *Option related to the rent*

This type of option, by affecting the rental rate, puts the parties to the contract at risk of uncertainty arising from the amount of the rent. A rental rate review that allows the tenant to adjust the rent based on future value (and sometimes the tenant) is usually used in contracts. Unless there is a specific case for changing the rate, this adjustment can reduce or increase the rent, which in case of increase in rent will not be able to cover the risk for the tenant and in case of decrease for the landlord, so they can not be considered



part of the options. But if we consider a specific change to be adjusted, then it can be considered in the area of authority. The option to increase the rent is one of these cases, which is considered as a purchase option, according to which the owner has the option to repurchase the rent at the previous price and then resell it to the tenant at the future market price. This option only benefits the landlord and can cover him or her against rising rental rates. This option can also protect the owner against the costs and risks of successive short-term contracts Smith and Posner (2009).

### Option to increase the rent

The option to increase the rent is one of the items that is considered as a purchase option, according to which the owner has the option to repurchase the rent at the previous price and then resell it to the tenant at the future market price. This option only benefits the landlord and can cover him or her in the face of rising rental rates. This option can also protect the owner against the cost of consecutive short-term contracts. However, the tenant still has to pay more than the market price at the risk of lowering the rent. Therefore, they usually set a low rent for the tenant to cover the mentioned risk; Hendershot and French (2019) and Ambrose et al. (2012) have shown a direct relationship between volatility and interest rates of this type of option. It depends on the higher cost of operations. Another advantage of this contract is the ability to save on transaction and transfer costs (Mehrdoost et al., 2014). To better understand the type of option chart, its value is presented in Figure 1. To simplify the recognition of this option, complete conditions for the market are considered.

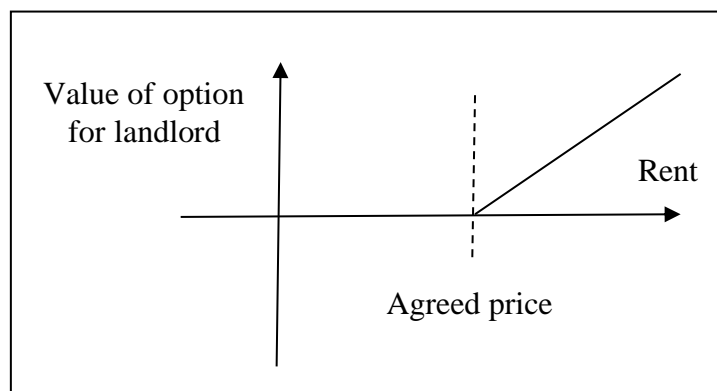


Figure 1. Return of rent increase option

Sometimes, in determining the upper and lower limits for renewing the rental rate, it is necessary to specify a maximum and minimum for adjusting the rental rate (Zargari et al., 2019). Although these limits limit the losses of both parties to the transaction, they also limit the potential benefits.

### *Term-related option*

The life of the lease is one of the determining factors of the lease. In accordance with the agreement, the lessee undertakes to rent the property at a specified period of time in exchange for the payment of rent. However, due to the uncertainty that exists in the rental rates, this period is considered to be at least possible, i.e. one year. There are options that



directly affect the duration of the contract and extend it through risk, income, changes in rates, rents, and interest rates (Erfanian and Voshagh, 2014).

### Renewal option for tenant

The new option for the lessee is one of the explicit powers contained in the lease. There are different types of renewal options that are differentiated according to the price of their actions. Renewal options, based on the price of their actions are divided into four categories: renewal at a fixed price, the market price at maturity, a percentage of the leased market value and adjusted to the current rate Proportion of one of the economic indicators (such as CPI) (Mehrdost et al., 2014). He saves on transaction costs and reconstruction costs for the new tenant, and covers the risk of the property being vacant and uncertainty about the new tenant's performance as benefits for the landlord. Exercising any of the renewal options in lease contracts, in addition to the tangible benefits it has for the parties to the transaction, also has an intangible advantage, which affects the systematic risk of the rental market (Gibson and Lizieri, 1999).

#### Renewal option at a fixed price

If the price of the action is fixed at the time of the contract, the new option acts as a financial option and can be valued as such. This option is considerably valuable to the tenant as it can cover the tenant against the risk of rent increase and also have the benefit of saving on transaction and transfer costs for the tenant. If we consider rent as a random variable and ignore other factors such as transaction costs, relocation costs and personal risks; The chart of value of renew option will be as shown in Figure 2 (Mehrdoust et al., 2014).

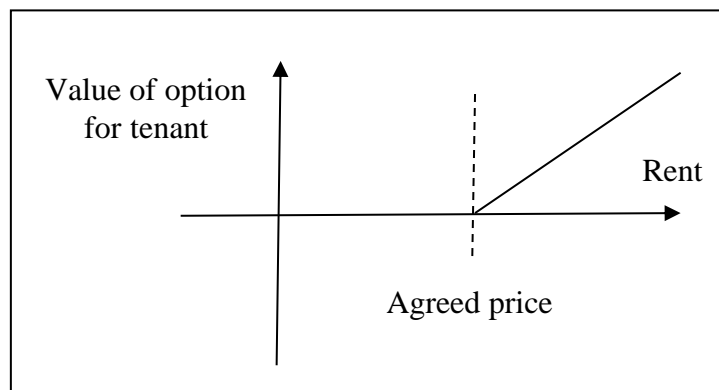


Figure 2. Return of renewal option at a fixed price

#### Renewal option in future value of market

The renewal option the future market value at maturity is one of the most common options issued on leases. This type of option can be considered a purchase option for the tenant. Although the price of this option is equal to its value at maturity and with conventional models, the option will have a value equal to zero, but in fact this option can be used for both depreciation of furniture for the tenant and uncertainty for the owner to

find the appropriate tenant and transaction costs are due to the use of this type of authority (Zargari et al., 1398).

### Cancellation option for tenant

The option to cancel / terminate a lease, also known as a termination clause, has been common in Europe and the United States since the 1990s. This option acts as a sale option for the tenant and is equivalent to selling the lease to the landlord at a price of zero to negative (termination penalty). This option has benefits for the tenant. There are cases that make the tenant want to have this option. The cancellation option can cover the tenant against the risk of reducing the rental rate (Izadifard, 2005). The cancellation value diagram will be in Figure 3.

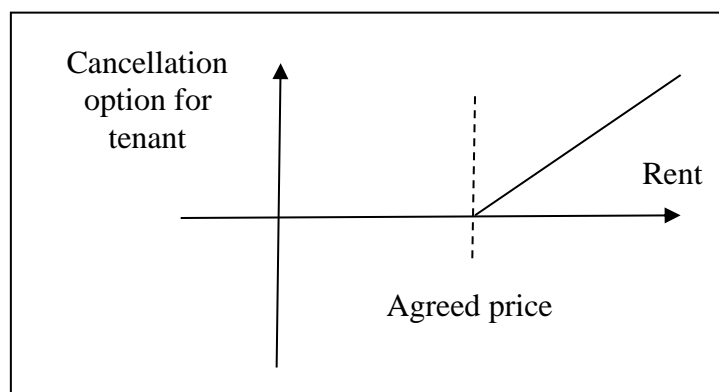


Figure 3. Return of cancellation option for tenant

If we want to cover the owner against the risk of price increases, we can consider the cancellation option for the owner. This contract plays the role of a purchase option for the owner and covers his risk against price increases. If the prices increase from a certain limit, the owner can cancel the contract and rent his property at a higher price (Zargari et al., 1398). The return from this strategy will be in Figure 4.

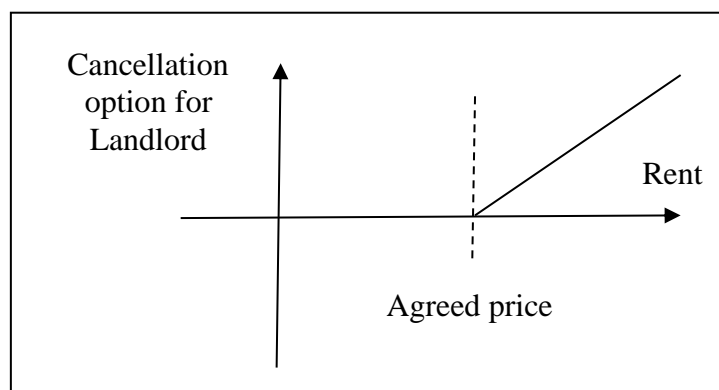


Figure 4. Return of cancellation option for Landlord

## Option to refuse

Tenants have always implicitly had the option of refusal on leases during the contract and before maturity (Sing and Tang, 2014). Previously, tenants believed that the benefits of refusal outweighed the costs. The option to refuse is different from the default of the contract because the refusal is given a period of time to apply it while the tenant can refuse on the contract at any time before maturity, and the deposit is refundable at the time of termination while this is not true in case of refusal of the contract and the deposit will be confiscated as a penalty. From the tenant's point of view, Singh and Tang (2014) equate the value of refusal with the reduction in rent resulting from the conclusion of a new contract minus the costs of relocation and refusal. In addition to rental rates, other factors such as bankruptcy are involved in the exercise of refusal.

### *Option related to the principles of contract*

In addition to the rental rate and the longevity of the contract, another important factor in the agreement between the parties is the commitment of each of them to the things they are committed to in the contract, such as paying the rent to the tenant and providing the same rent for the landlord. Failure to fulfill obligations is another source of uncertainty that each party seeks to cover according to its position. The powers used to cover these risks mainly affect the obligations of the parties. In evaluating this type of tools, new factors such as the credibility of the parties should be considered (Erfanian and Vashagh, 2014).

## Conclusion

The existence of a traditional framework for housing rental contracts, in a situation where the housing sector - especially the rental sector - is one of the main sectors of the country's economy, causes problems in the housing rental sector, especially during the relocation. The sudden influx of applicants to review and select the desired housing in a limited period of time causes the balance between supply and demand to be disturbed in a false way. The social and climatic conditions are such that the tenants have to move in the summer, while this requirement should not lead to the return of these people in the same summer. Having the option tools that can increase the flexibility of leases can be helpful. Renewal authority is one of these tools. Using this type of option will reduce the number of people referring to the rental market in the summer (the cause of the challenge in this season) or at least the number of visits distributed in other seasons and reduce its density in the relocation season.

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