Financial Risk Management in Real Estate Investments for Rehabilitation

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Abstract: The present study focuses on the real estate investments for rehabilitation and aims to identify and comprehend the multiplicity of phenomena that carry risks to the investor, as well as the existing incentives and provisions which may have a positive impact on these projects. This essay is supported by other national and international studies, which complement and consolidate the methodology applicable to risk management in investments regarding real estate rehabilitation. Therefore this study is divided in four essential parts that allow for a holistic approach to the subject. The first two chapters are centered in the theoretical comprehension of the concepts related to risk and particularly to real estate risk; and, following, we shall shortly analyze the matter of real estate rehabilitation. Later on, bearing in mind the theoretical knowledge acquired in the previous chapters, we will deeply examine risk management in rehabilitation. Finally, three case studies will be presented, about three buildings acquired by investors for the purpose of rehabilitation. In these case studies it will be applied the risk management methodology developed in this study which will promote a more critical analysis to the investors decision-making process and, in turn, prove that had the investors followed the methodology developed and described here, their profit could have been quite higher.

Keywords: Real estate investment; risk analysis; rehabilitation; urban renewal

Introduction

During the last few years, real estate investment has shown a clear growth, probably because it represents an alternative to traditional financial investments, particularly during the crisis. Nowadays, considering the crisis, financial investments without risks are fruitless, with return rates of, at best, 1%. Therefore, real estate investment, a market that has been in clear growth, can provide return rates higher than 6%, making it an attractive investment, even considering the risks.

At the same time there has been a big demand, from the investors, of the real estate proprieties for rehabilitation and allocation to short-term rental market. This demand has been reinforced by both the growth of tourism in Portugal and by the interest of tourist in being closer to the cities center, principally on the metropolitan areas of Lisbon and Oporto. Showing no signs of slowing down, the growth of tourism has had an important role on the promotion of real estate investment for short-term rental, because of expected return rates. In this market, the return rates and the monthly income generated are quite larger than in long-term traditional rental markets, making it much more attractive market for investors. The legal vacuum, the shortage of investors to fulfill the obligations regarding the legalization of these spaces as economic activity and an absence of continuous and effective State supervision made this new business rise quickly. In many cases most investors do not declare their incomes, making it unnecessary to pay any taxes.

The crescent urban migration and the exceeding existing dwelling in Portugal has turned urban rehabilitation, through the rehabilitation of obsolete and/or unoccupied existing houses in cities, in a privileged approach to housing.

Currently, the buildings in Portugal are obsolete, presenting signs of advanced degradation and no capability to fulfill the existing needs. At the same there is a positive correlation between the general degree of degradation and the proximity to the center of cities. Therefore, there has been a great national promotion of urban renewal through the implementation of initiatives and fiscal benefits. These initiatives focus on prompting the rehabilitation of buildings in Urban Renewal Areas or buildings that match certain criteria and can give advantages to both the investors and the future occupants.

Considering the risks associated to this type of investments, a careful evaluation of the financial risk is very much needed and it should encompass a cost-benefit analysis that supports a well informed decision. Today's real estate market shows clear differences from the market before the crisis, making it no longer possible to determine a building's sale price based only on the total investment in acquisition and rehabilitation. Today one must do a careful market study, in order to evaluate the investment and its potential return rate. So, today it is market dynamics that outlines the investor's strategy so that return rates can be maximized.

Another aspect that underlines the importance of the present study is the lack of knowledge shown by the investors about rehabilitation, both in terms of requirements and challenges. An investment that shows a great profit potential, sometimes, become a disaster, due to lack of knowledge and inexperience of the investor.

A project of such nature requires a careful market study and a thorough examination of the building. For that reason it is not possible to apply a construction work formula to all the buildings acquired and projects. There aren't two projects alike in terms of rehabilitation technical work, and if the investor doesn't recognize that, the project will face serious problems. Each building has a different project, and even if that is not the case, the construction wasn't the same, which can determine if a rehabilitation project will be successful or not.

Rehabilitation processes without any obstacles are rare but, obviously, there should be as few setbacks as possible. The consequences to the project, not only in terms of its financial success but also as regards to its duration, can be vastly influenced by the lack of information about its risks or anomalies. There must be a good identification and evaluation of each risk and/or abnormality. There have been described two non-exclusive methodologies: (i) the profound study of the building through examination tests, recollection of all the available information; and (ii) the addition of an extra amount of funds destined to fight any setback found during the works.

Taking this to account, it was necessary to do a careful analysis of both the risk and the rehabilitation itself, in order to increase the quality of recent rehabilitation projects. A good risk appraisal leads to an easier treatment and/or mitigation of the risks whenever necessary, but is completely dependent of the investor's profile.

This sector has an increasing national importance, not only economically but, above all, because of the protection of national historic buildings. It is important to underline that only a careful building rehabilitation can lead to a good maintenance of national, regional and local identity. Many recent projects led to a complete loss of the identity of the building and neighborhood.

There is no need to do rehabilitation works that prompts the complete transformation of the building, rehabilitation can be competitive without been neither reconstruction nor the single maintenance of the building's facade. This is why it's necessary to promote building rehabilitation, a task only possible if it is attractive to the investor, whose main goal is to obtain profit.

Methodology

The methodology in which this investigation is based on consists in eight steps: bibliographic research about the subject, mainly other dissertations, publications and scientific articles; analysis of urban renewal legislation and regulation; study of existing aids and funds concerning rehabilitation; analysis of statistics studies on the matter; compilation of rehabilitation risks; establishment of risk mitigation methods and processes; application of acquired knowledge to three case studies; comparative analysis between developed theoretic procedures and case studies.

Findings

Risk can represent an opportunity, sometimes, taking advantage against competition, and this can be the result of a correct and maximized research, leading to a conscious decision. How an investor sees an event varies greatly from person to person, and in turn alters the criteria in terms of the level of risk associated to each event, which can be determined as seen on Table 1.

Table 1 – Risk level

Level of undesirability \ Occurrence probability	Low	Medium	High
Low	Very low	Low	Medium
Medium	Low	Medium	High
High	Medium	High	Very high

There are many ways to deal with the risks of an investments, for instance: *diversification*, in which the investor can opt for multiple investments in order to fight a potential problem or crisis associated to a specific type of investment; *insurance policies*, to downgrade any incident that may occur during the investment; *options*, which can be to buy or sell options, with different maturities and prices; *forwards*, allowing the investor to prevent market fluctuation and uncertainty by setting a previous contract with the future buyer; *loans*, to get financial liquidity and capacity to do whatever the investment requires; and *time*, the longer the deadline of the project/investment, the more uncertain it is, so shortening the time may grant less changes.

To assure a better risk management the investor needs to constantly evaluate the risks and the context variations, as shown by the ISO 31000, 2012; and, at the same time, to stay loyal to the principles shown on this standard, in order to increase the potential to succeed.

In Portugal, building rehabilitation has been establishing itself as an important sector of both construction and the national economy, representing more than 30% of the yearly licensed construction works in the last 4 years. This data may be even greater considering that Portuguese legislation does not require license for rehabilitation interventions that take place only inside walls. With the establishment of new legislation and policies concerning rehabilitation and urban renewal, namely with the establishment of Urban Renewal Areas, rehabilitation has become more competitive facing new construction. Apart from this, there are many tendencies that promote rehabilitation, such as: urban migration, leading to a bigger density in city centers; the house price index, which has been rising for the last 4 years, mostly on the existing houses; housing transactions have been rising during the same period; the transaction of existing houses represented more than 80%; bank evaluation of the square meter rose significantly on the last 3 years; foreign investment is rising; and the cost of new construction has been rising in comparison to rehabilitation costs, mainly because of fiscal benefits.

Buildings in Portugal are aging and more than 60% of them has already 30 or more years old, as shown on Chart 1, representing the national necessity of building rehabilitation.

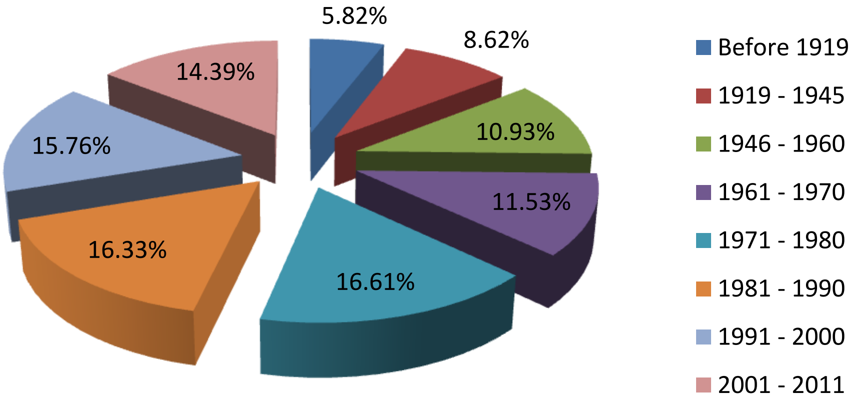

Chart 1 - Buildings' year of construction

Furthermore, each period has a corresponding construction method, which leads to different necessities nowadays. This means that every building is a different challenge, and even if two buildings are from the same period, they may present different levels of degradation. As a result, if investors want to thrive on this business they better carry on visual inspection as well as more detailed studies in order to detect as much abnormalities as possible, its level of development and, if possible, the reason why it has appeared and evolved.

Real estate investments for rehabilitation present many risks, all of which represent a financial risk, because no matter the nature, it will always have a timeline and/or a financial consequence. Therefore, the risks identified can be catalogued in three types: *context*, which can be related to the investor, his knowledge and experience (internal context), or to the environment in which the investment is located (external context), in this case it was considered the use of a PEST (Politico-legal; Economical; Socio-cultural; Technological) approach; *building*, this risks encompasses all the challenges of building itself, like location, conservation and obsolescence; and *project*, which consists on the uncertainty of the investment's appreciation, the financial condition of the project and the market. Based on these risks, a risk matrix was built with the intention of helping investors evaluating the risk of an investment/project. The matrix, which can be seen on Table 2, has a maximum risk level of 100 points, with each factor contributing with different weights.

Table 2 – Risk matrix

Risk \ Risk level			1	2	3	4	5	Total risk level	Relative weight
Context	Internal	Investor						0.00	x2
	External	Politico-legal						0.00	X0.75
		Economical						0.00	X0.75
		Socio-cultural						0.00	X0.75
		Technological						0.00	X0.75
Building	Location							0.00	x2
	Surrounding	Neighborhood						0.00	x1
		Accesses						0.00	x1
		Services						0.00	x1
		Leisure spaces						0.00	x1
	Technical aspects	Information level						0.00	x1
		Conservation state						0.00	x1
		Materials						0.00	x1
		Constructive method						0.00	x1
Project	Appreciation							0.00	x1.5
	Financing							0.00	x2
	Local market							0.00	x1.5
								0.00	

As regards to the risks identified, it was developed a list of techniques/methods to assure their mitigation, such as: market study, to a better understanding the market, demands and necessities; research, one of the most important aspects is collecting the most as much information as possible about the building so that anomalies can be previously estimated; diversification, insurance policies and time, which have already been analyzed.

In this study were presented three case studies. The first case-study, regards to an apartment in Lisbon, dated from 1916, with a calculated risk level of 53 points - mostly a consequence of the low level of information obtained before the investment, presenting a maximum risk level in this parameter. This investment was based on a long-term rented house, contract of 15 years starting in middle 2015, that was rehabilitated to further allocate to short-term rental market. There were no previous research and as a result the intervention lasted much longer than expected and its cost rose 50%.

The second case was based on a single dwelling house in the center of Leiria, built on the first half of the previous century. This house was bought on 2006, before the crisis in Portugal, leading to a long term investment considering that it was only rehabilitated 7 to 8 years later, and was allocated to long-term rental market in order to minimize the impact of the crisis on the investment's return rate. In this case, the risk level calculated was 47.75 points, as a result of the low research done by the investor, which in turn led to a further intervention, 3 years after the rehabilitation due to an unidentified risk. Another important aspect, as the investor mentioned was the location, being near center of the city, it was a calculated risk, says the investor, because the city centers always sell.

Case study 3 concerns the rehabilitation of a classified historic building in center of Leiria. Built in the 12th century, this compound has been a convent, a prison and a milling house, and is now is being converted to a luxurious apartment complex. It showed the lower risk level of the three cases, only 45.75 points, being the most problematic factor the constructive method of the building, which already suffered previous interventions. Besides the building's technical aspects, this investment appeared in a turbulent time, in the middle of crisis, and as a result of the economic environment wasn't as favorable to investments as it is now. As a consequence of this environment, the intervention on the building only begun 1 to 2 years later, at the end of the crisis, with the hope that national economy would start recovering, leading to better conditions for the investment considering at the contracts for materials that were already made it cheaper. After 4 years, the building has needed many interventions that weren't estimated, but this came as no surprise to the investor given the building's age.

As the case studies showed, a great aspect on rehabilitation projects nowadays is the level of information of the investor before the investment. The better it is, the fewer setbacks will appear during the intervention. Besides that, the context in which the investment is made and the establishment of a financial cushion in order to deal with any setback that appears during the intervention are important aspects to a successful investment.

Conclusion

The first important aspect in real estate market is the investor's posture. Each and every single one shows different reasons and motivations, different preferences in terms of business methods and different financial conditions, which have a great impact on how projects and investments develop.

The real estate market is uncertain and to succeed in such conditions it is necessary to understand it. Before the crisis, investors would acquire, rehabilitate and sell the buildings or fractions applying a pre-established return rate, and so it wasn't necessary to do a proper market study. In nowadays market, investors who still use that method will have a ruinous project, because it is necessary to do a proper market study, identify demand and supply and, only then, make the investment.

On the other side, to succeed it's quite important to do previous research about the building in order to determine its conditions and requirements, which should be accompanied by further tests. In case none of these are done, anomalies will be uncover during the intervention, that weren't identified previously and could have been easily mitigated, leading to bigger investments, as seen on the first case study. In the current market this can represent the difference between a good and a ruinous investment.

The ability to take action, decide assertively and at the right time, and the capacity to understand the market development are very important aspects for making a good investment. Therefore, it's needed to be a quick, aggressive and assertive decider in order to benefit from the moment, offering what the market demands at the right time and while it is not overloaded. At the same time, it's easy to see that saturation leads to fewer good investments, making the capacity of deciding, acting and reacting extremely important.

One of the riskiest way to act as an investor is exploring only one market segment. By doing this, the investor becomes more dependent on the market and if that market starts to get saturated, the investment will not be profitable. At that point the investor has only two options: either he invests more on that market he already knows, even though it's saturated and has a lot of competitors; or he invests on another market, in which he doesn't have the same knowledge and experience, which can also turn into a ruinous investment, for lack of market information. Diversification can have many forms, it can be referred to the model of business, location, property type and so on.

For last but not least, there is another uncertain aspect to real estate investments for rehabilitation: the external context. At the moment of the investment, its location may be the best, its neighborhood and accesses valued, but shortly after it can all change. Even national and municipal policies can turn really quick, for instance new legislation concerning the seismic obligations in rehabilitated buildings can easily take away the investors return rates or making the rehabilitation market only accessible to few investors, considering the costs and knowledge necessary to such intervention.

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