

Evaluating risk in real estate investments in areas of special value and environmental beauty

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Key words: Risk in Real Estate Investments, Valuation, Environment.

SUMMARY

In the case study presented here, we analyse the critical aspects related to the financialization of the real estate market, we review some of the methodologies employed to evaluate risk in real estate investments and provide an example of appraisal of the so-called “embedded value”, using the approach developed by the Appraisal Research Lab of the University of Cagliari.

In the context of real estate located in small areas characterised by high tourist and environmental value, such as the area selected for our case study - "Costa Smeralda" Arzachena (OT), Italy - real estate value is typically subject to strong appreciation. In many instances, the unit value of real estate in such prestigious areas can exceed that of more upmarket segments of the world's main capital cities.

The analysis of real estate investment risk is supposed to take into account a large number of factors, not always related to the actual quality of the building, including factors that are notoriously difficult to identify and evaluate, such as the permanence of those environmental characteristics that originated the real estate success of settlements like the one we examine here.

The standard methodology to evaluate the risk of real estate investments may not work in this kind of locations.

Analysing real estate investment risk should therefore be oriented towards:

1. assessing the actual capacity to preserve the same environmental quality that had made the location's success in the first place, and
2. the relationship between the overall value of the estate and the value that can be directly attached to its external characteristics (quality of the built and environmental context).

The combined appraisal of both factors above, in the case of sites characterised by high environmental value, is an adequate methodology to complement the existing techniques for the valuation of risk in real estate investments.

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1. INTRODUCTION

As the world economic crisis intensified and expanded, the real estate sector – traditionally considered to be a refuge sector, generally immune from recession shocks – was also dragged down, a result of the growing trend towards financialisation of the real estate markets.

This trends, which was practically non-existent in Italy some time ago, has created new players and generated speculative phenomena which rapidly modified the entrenched cycles of construction and real estate and their very stable patterns. Furthermore, the action of global investors has altered the values previously exhibited by the local market, usually generating a strong increase in prices.

However, in the case of buildings of the highest band, located in particularly fashionable tourist areas or in valuable locations of the world's top capital cities, the disengagement of global investors could rapidly determine the decline of the local real estate market to the benefit of new or more prestigious locations.



Figure 1 - Marina di Porto Cervo
Source: www.sardegnaigitallibrary.it
Photographer: Paolo Magnanelli

In Italy the integration of finance with the real estate sector in the last decade, however, has produced very positive effects as well, as it made real estate operators more aware of their role, which in turn improved the general culture of real estate valuation, with greater diffusion of valuation methods that are more compliant with the international standards and strong growth of specific training and learning in this area.

As the banking sector became strongly involved with the real estate sector, those lending institutions who developed and implemented transparent procedures for the valuation of real estate assets used as credit security are especially rewarded. In Italy this trend was very strong and motivated the publication of specific guidelines for asset valuation in 2010.

The issues highlighted above, however mitigated by the counter-measures adopted by the banking sector, have determined a strong demand for research focussed on rating systems for assets and real estate market appraisal as well as methodology for risk analysis and valuation in the real estate sector.

2. RISK ANALYSIS OF REAL ESTATE ASSETS

The case study analyses the effect of the financialisation of the real estate market, and provides an example of the so-called “embedded value” approach to valuation, using the methodology developed by the Valuation Research Lab of the University of Cagliari, to analyse and evaluate the risk of real estate investments in locations of outstanding environmental value.

In the context of real estate located in small areas characterised by high tourist and environmental value, such as the area selected for our case study - "Costa Smeralda" in Italy - real estate value is typically subject to strong appreciation, especially for the most exclusive properties. In many instances, the unit value of real estate in such prestigious areas can exceed that of more upmarket segments of the world's main capital cities.

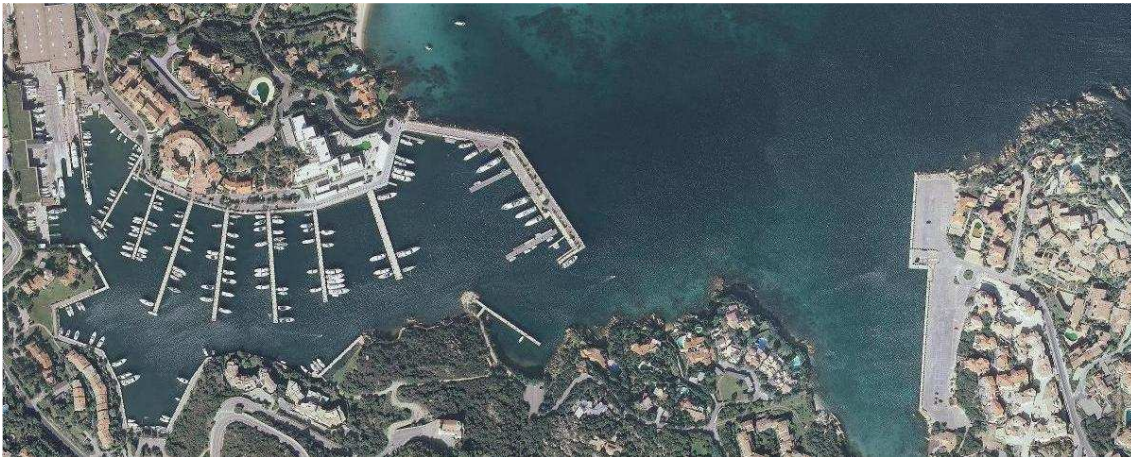


Figure 2 - Porto Cervo

Source: www.sardegнатerritorio.it

The development of this type of location has often been strongly influenced by the decisions of those foreign investors who had set up major residential and tourist developments on the basis of the high quality of the local natural environment.

The analysis of real estate investment risk is supposed to take into account a large number of factors, not always related to the actual quality of the building. The analysis should include factors that are notoriously difficult to identify and evaluate, such as the permanence of those environmental characteristics that originated the real estate success of settlements like the one we examine here.

The standard methodology to evaluate the risk of real estate investments may not work in this kind of locations.

Analysing real estate investment risk should therefore be oriented towards assessing the actual capacity to preserve the same environmental quality that had made the location's success in the first place, as well as the relationship between the overall value of the estate and the value that can be directly attached to its external characteristics (quality of the built and environmental context).

The first of the two factors (preservation of environmental quality) has been evaluated through the analysis of those local characteristics which drive the value of the area, assessing which factors could cause those characteristics to deteriorate and finally selecting indicators to express the a priori probability that such deteriorating events may actually occur.

The second factor (based on the extrinsic characteristics of the building) is evaluated by determining the coefficient of the relationship between "embedded value" and "market value", highlighting what percentage of the value is permanently embedded in the building relative to its market value.

The combined appraisal of both factors above, in the case of sites characterised by high environmental value, is an adequate methodology to complement the existing techniques for the valuation of risk in real estate investments.

In the areas under study other issues need to be considered, which can be even more unpredictable, such as any radical change in investors' intentions that may determine the success or decline of entire tourist areas or construction sectors.

3. ACTIONS TO CONTAIN RISK IN REAL ESTATE INVESTMENT - THE CURRENT STATE IN ITALY

In Italy, the sector that developed the most forceful actions to reduce the risk of real estate investments is the banking sector, following the international Basil II accord.

One of the most important by-products of the containment of real estate risk is the acknowledgement, on the part of the profession, of the need to elevate its knowledge level and to adopt international standards for appraisal.

For the Italian valuers' community, the following standards are especially relevant:

- IVS - International Valuation Standards (from the IVSC - International Valuation Standards Committee);
- EVS - European Valuation Standards (from TEGoVA - The European Group of Valuers' Associations); and the four versions of the Code of Valuations - Tecnoborsa (this is the first attempt to propose an Italian valuation standard that takes into account the peculiarities of valuations in Italy).

Further steps in the same direction were taken by ABI (the Association of Italian Banks) who published "Guidelines for the valuation of real estate as security of credit exposures" (also published in reply to the circular from the Bank of Italy N. 263/2006) and with the activation of the certification system ISO 17024 (CRIF Certification Services).

An intense and wide-ranging promotion of the international standards and of professional training was carried out nationally by the association Geo.Val.Esperti (Expert Valuator Surveyors), with the patronage of the Fondazione Geometri Italiani (Italian Surveyors Foundation) CNG - Consiglio Nazionale Geometri e Geometri Laureati (National Council of Surveyors and Graduate Surveyors) and C.I.P.A.G.L.P.; this decade-long activity has been the driver of several initiatives carried out by other players as well.

4. RISK ASSESSMENT

Among the many solutions available for risk assessment in real estate investments, the following are worth mentioning:

-the “Property and Market Rating (MoriX)” system, designed by the HVB - HypoVereinsBank Expertise banking group (part of the Unicredit group of companies) and tested by the Laboratory of the University of Cagliari using the GMMA software.

-the RER (Real Estate Risk) model, which is the result of the research promoted by Deutsche Bank Fondimmobiliari and Larry Smith Italia and carried out by the Economics department of the University of Parma (Prof. Claudio Cacciamani).

They (above all the first), evaluate the key variables that need to be considered when assessing real estate:

- Dependency on market;
- Individuality;
- Tied to a location;
- Benefit / yield.

These systems are aimed at identifying a set of standard criteria to measure real estate risk, to support investors’ decision making and to protect credit exposures.

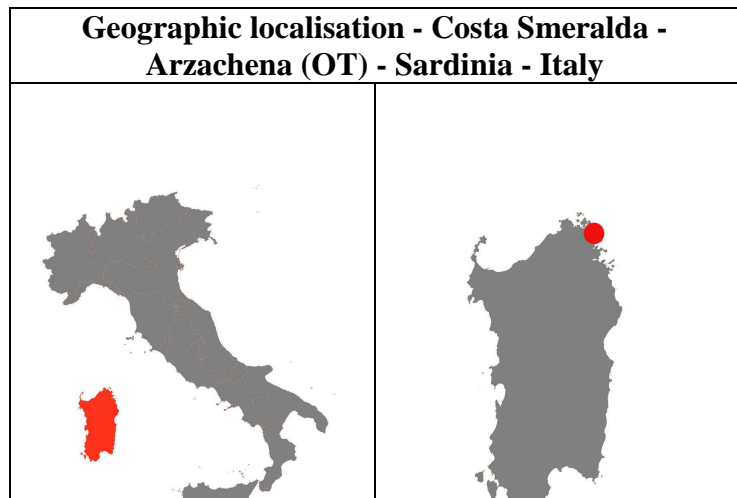
5. EMBEDDED VALUE

5.1. Geographic localisation

The area we focus on is called Costa Smeralda [the Emerald Coast] and is a stretch of the North Eastern coast of Sardinia – the second largest Italian island of the Mediterranean - within the municipality of Arzachena.

The area has an overall surface of 3'500 hectares along nearly 55 km of coastline, even though presently the term Costa Smeralda is often used to identify an even larger area.

The most well-known resorts of the area are Porto Cervo, Cala di Volpe, Capo Ferro, Grande Pevero, Liscia di Vacca, Liscia di Ruja, Munti Tundi, Pantogia, Piccolo Pevero, Piccolo Romazzino, Pitritza, Razza di Juncu and Romazzino.



5.2. A brief history

The consortium of Costa Smeralda, which comprises the area we focus on, was established in 1962 by Prince Aga Khan Karim IV (Imam of the Muslim Ishmaelites).

The first phase of the development took place in a virgin coastal territory made up of granite boulders and Mediterranean maquis of great environmental beauty. This phase featured residential and tourist buildings characterised by an original Costa Smeralda architectural style, known as “spontaneous” or “neoMediterranean”, which eventually spread out to other tourist areas.

This original architectural style, questionable as it may be, was especially mindful of the way buildings blended with the surrounding natural environment, whereas the later building stage did not maintain those original standards.



Figure 3 - NeoMediterranean style
Source: www.sardegnaigitallibrary.it
Photographer: Pietro Paolo Pinna

5.3. The Local market

From the beginning, the area of the Costa Smeralda and surroundings has become the favourite destination of a national and international high level clientele, following its unique, well integrated tourist development in an environment blessed with outstandingly beautiful coastline overlooking a superb body of water.

The real estate market has some of the highest values in Italy and features unique sea front properties (even by international standards) endowed with panoramic views, large parks, sporting facilities and private marinas. Also, whether or not the property was owned by famous people may influence the sales price.



Figure 4 - Liscia di Vacca
Source: www.sardegnaigitallibrary.it
Photographer: Paolo Magnanelli

In markets like this, with great environmental value, the usual methods of valuation of the real estate risk previously highlighted may be difficult to apply and may yield unreliable results.

5.4. Estimating the embedded value

Considering that:

- in the real estate market under study exhibits unit values higher than those of the top capital cities in the world;

- the buyers may come from any part of the world, as they are attracted by the uniqueness of the landscape and environment;

it becomes apparent that the analysis of real estate risk has to address the preservation of the environmental quality which in fact determined the real estate success of the Costa Smeralda and of other comparable locations.

The traditional methods of real estate risk analysis are unlikely to return reliable valuations in this kind of locations, with few actual sales transactions to analyse.

In particular, the assessment of the real estate risk must evaluate which qualitative environmental features are currently observable, which factors may compromise them and to what extent.

The research carried out at the University of Cagliari allows to separate the share represented by the intrinsic features of the property from its overall **Market value (Mv)**.

For new buildings, the property's features are represented by the **Technical cost of construction (Tccv)**, which has little influence over market variations. The value obtained separating the Technical cost of construction (**Tccv**) from the Market value (**Mv**) is the so-called Embedded Value (**Ev**) = (**Mv** – **Tccv**), which includes, quoting the University research, the **“most stable and permanent value elements, if they are supported by a high probability that those quality levels are maintained which give ‘uniqueness’ to the environmental context”**.

The ratio **Ev/Mv** produces the coefficient **K**; and the results of the study reported above and of the field work conducted, show us that:

-if **Tccv > Mv** then **K < 0**, as is the case in depressed markets;

-if **Tccv = Mv** then **K = 0**; as is the case when market and construction value coincide;

-if **Tccv < Mv** then $0 < \mathbf{K} < 1$; and the closer to one, the greater the value of environmental opportunities/enhancements.

For established rather than new properties, the equivalent of **Technical construction cost (Tccv)** can be attained through the reproduction cost of the same property, less the accrued depreciation of the property at the time of the valuation.

In the following, we will apply the scientific method developed by the University of Cagliari, to real property values surveyed in the local market, regarding a Villa (not recently built) located in one of the best sites in Costa Smeralda (Cala di Volpe).



Figure 5 - Cala di Volpe
Photographer: Walter Rosa

The ascertained market value (**Mv**) of this property is 40'000.00 €/m², the depreciated technical construction cost (**Tccv**) is 5'000.00 €/m², which yields an embedded value (**Ev**) of 35'000.00 €/m² (40'000.00 - 5'000.00).

The **K** coefficient is 0.875 (35'000.00/40'000.00).

In our case study of a property located in a site of outstanding natural beauty, the high construction cost turns out to be an almost negligible share (12.5%) of the total property value.

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