



FIG Working Week 2012

Rome, Italy 6–10 May

Knowing to: Manage the territory
Protect the environment
Evaluate the cultural heritage



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

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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, as result of the growing trend towards financialisation of the real estate markets.

In the case of buildings of the highest band, the disengagement of global investors could rapidly determine the decline of the local real estate market to benefit of a new or more prestigious locations.



Marina di Porto Cervo

Source: www.sardegna.digitallibrary.it
Photographer: Paolo Magnanelli

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1. Introduction

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.



Cala di Volpe
Photographer: Walter Rosa

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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.



Porto Cervo
Source: www.sardegna.territorio.it

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2. Risk analysis of real estate assets

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.

The analysis of real estate investments risk is supposed to take into account a large number of factors, not always related to the actual quality of the building.

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



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3. Actions to contain risk in real estate investment - the current state in Italy

The main standards for Italian valuers are:

- IVS - International Valuation Standards;
- EVS - European Valuation Standards;
- The four versions of the Code of Valuations written by Tecnoborsa;
- Guidelines for the valuation of real estate as security of credit exposure, by ABI.

Promotion of the international standards and of professional training was carried out nationally by:

1. ISO 17024 certification (CRIF Certification Services);
2. Geo.Val. Esperti (Fondazione Geometri Italiani, CNG and C.I.P.A.G.S.L.P.'s patronage).



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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)” sistem, designed by HBV;
- The RER (Real Estate Risk) model.

The key variables that need to be considered when assessing real estate:

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



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5. Embedded value

5.1. Geographic localisation

Costa Smeralda (the Emerald Coast) is located in Sardinia, which is the second largest Italian island of the Mediterranean sea. The area has an overall surface of 3'500 hectares along nearly 55 km of coastline.

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

Geographic localisation - Costa Smeralda -
Arzachena (OT) - Sardinia - Italy



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5. Embedded value

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).



NeoMediterranean style
Source: www.sardegndigitalibrary.it
Photographer: Pietro Paolo Pinna

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5. Embedded value

5.3. The local market

The area of the Costa Smeralda and surroundings has become the favourite destination of 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 endowed with panoramic views, large parks, sporting facilities and private marinas.



Liscia di Vacca
Source: www.sardegndigitalibrary.it
Photographer: Paolo Magnanelli

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5. Embedded value

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 Costa Smeralda and of other comparable locations.

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5. Embedded value

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".

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5. Embedded value

The ratio E_v/m_v produces the coefficient K ; and the results of the study reported above and of the field work conducted, shows us that:

- If $T_{ccv} > M_v$ then $K < 0$, as is the case in depressed markets;
- If $T_{ccv} = M_v$ then $K = 0$, as in the case when market and construction value coincide;
- If $T_{ccv} < M_v$ then $0 < K < 1$, 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.

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5. Embedded value

In the following we'll 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).

The ascertained market value (M_v) of this property is 40'000.00 €/m², the depreciated technical construction cost (T_{ccv}) is 5'000.00 €/m², which yields an embedded value (E_v) 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 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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