

# **A SURVEY ON ASSET ALLOCATION IN THE PORTUGUESE REAL ESTATE MARKET**

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## **ABSTRACT**

Most important academic theoretical developments in finance and investment have been transferred to widespread practical use, especially in the more efficient securities markets. Real estate investment research has followed these developments, with a lag of about 20 years, but to some extent, common practice of asset allocation in a property portfolio still relies a lot on a qualitative and subjective personal judgment.

To assess the reality and extent of this situation among the institutional property investors operating in the Portuguese market, a study based on a survey among a reference group of managers of large real estate portfolios was developed. This includes real estate fund management societies, pension funds and significant real property investment companies. The survey covers management decision-making practices, use of specific information, indices and databases, the role of appraisal, and the use of quantitative models regarding performance measurement, benchmarking and optimization of asset allocation. The aim is to establish the real gap between theory and practice. Research design is presented and justified against economic reality, and recent related and similar studies.

**Keywords:** Asset Allocation, Decision Making, Real Estate

## **1. INTRODUCTION**

Research on the subject of real estate finance has always been positioned between two important horizons – state of the art of the finance theory and property management practice.

On the one hand, there is a historical tendency of the academic research on property management to follow credited financial theories, mostly derived from the traditional securities market (stocks and bonds). On the other hand, most researchers expect their work to be useful for improving the

performance of property professionals, regarding their current practice, the availability of information and means. Many of them identify this as the main focus of their research, rather than following elaborate and sophisticated finance theoretical models.

Accordingly, researchers may feel more magnetized to one than the other side of the subject, but eventually recognize that in real estate one cannot live without the other [Souza, 2000].

In Portugal, for reasons detailed below, academic research on property finance is, at least, incipient. In spite of this, significant academic interest and valuable work has been developed over the last 20 years on other related areas like appraisal and valuation, project finance and land development.

In view of the above, one of the starting points for developing research on the area of Portuguese real estate finance is the characterization of the current practice and decision making processes used by organizations and professionals managing real estate as a financial asset, with emphasis on large portfolio holders.

In this paper, a research methodology for assessing this objective is presented. The survey to the literature has revealed distinct approaches for studying realty investors. Research developed on the United States and the United Kingdom markets is dominant; nothing even barely similar could be found on the Portuguese case. The body of knowledge on managerial behavior into those markets covers many issues, from asset allocation to attitude towards appraisal, building on contributions from various authors like *Webb (1984)*, *Louargand (1992)*, *Bajtelmit(1995)* and many others.

More comprehensive and recent research, like the works by *Farragher et al (1996)* and *Worzala et al (1997)* developed in the scope of the United States market of real estate institutional investors have been an important source of inspiration for this survey. Moreover, they may be partially used for comparison with the results of this study, despite their significant differences in scope, questions asked and characteristics of population.

Accordingly, the methodology for attaining the aims of this study has been established on the basis of previous research, as follows:

1. Establishing the main characteristics of the market under study taking into account recent history and economic background;
2. Defining the approach for the survey, in view of the size of the target population and its structure;
3. Setting specific objectives;
4. Structuring the enquiry layout in order to attain the objectives set;
5. Testing the layout on sample interviews regarding possible revision and improvement;
6. Surveying the population according to the defined procedure;

7. Treating collected data – aggregation of results, descriptive and other statistical procedures to be defined in view of the quality of data;
8. Analysing results, benchmarking and conclusions.

This paper mainly covers steps 1 to 5. It explains the reasons for the selection of the issues covered by the survey, based on the characteristics and historical background of the Portuguese market and on the structure of its institutional players. Report on subsequent work and aggregate end results of the survey will be presented in the future.

## **2. PORTUGUESE RE INVESTMENT MARKET – PAST AND PRESENT**

Economic activity in Portugal has been conditioned by political factors in the last century. Focusing on the democratic period only – the last thirty years - two different stages may be distinguished:

- Firstly, the years of the political revolution (1974) until the admission of the country in the European Economic Community (1986) - a turbulent transition period to stable democracy, with many economic and social difficulties along the way.
- From then to the present, on a continuous social and economic evolution, based on more stable internal conditions and external support, progressively rising to the average standards of the reference countries of the European Union.

In spite of later corrections, the changes which occurred in the first period have conditioned our recent economic reality in various ways. Concerning real estate the following aspects may be highlighted:

- Legislation on property rental has decreased the housing rental market to almost inexistent and strongly conditioned ancient commercial rental contracts. This heavily restricts the buy-and-hold option and encourages house owning and development for immediate sale.
- The structure of the financial institutional market has been very conditioned by a recent past of nationalizations and re-privatizations. However, the impact of those has been reduced over the years, as the market reorganised. The entry of external investors in the national market and the internationalization of national financial institutions have contributed for this.
- The housing shortage that lasted until the late 1990's together with the economic and social development of the last 20 years fostered a continuous rise in property investment, making it historically regarded as an almost riskless investment.
- Taxes on property are obsolete and not related to market values. This sets an unconditional bias on any control on the real estate economic sector that may be derived from tax information.

For all the above and other various reasons, national institutional investors, acting in a long-term buy-and-hold perspective have a rather limited number of instruments. These are mainly real

estate funds (open-end or close-end), pension funds (public and private), insurance companies and a very small number of large property investment companies. Internationalization is yet taking its first steps. It is limited by the small size of the country and its economy, and mainly focused on the prime office market (Lisbon and Porto) top commercial areas (mainly large shopping centres) and some warehouses/industrial property.

To date, in Portugal, there are 64 different real estate funds, from which 14 are open-end and 50 are close-end funds, with a total capital value of 6800 million euros. (source *CMVM*, Nov 2004). These are managed by 35 managerial societies, mostly related to major financial groups acting on the national market. The start of their activity dates back to 1986. One of the main reasons for their growth in size and number is the tax benefits they have granted from the government. For this reason, the amount of money they currently manage is considerably larger than that of real estate investment companies, which have no special tax treatment. Accordingly, some close-end funds have originated in a limited set of property investors gathered under that specific legal form mainly because of tax favourable conditions.

Pension funds have about 12% of their total portfolios directly or indirectly invested in property, totalling 2000 million euros (source *Watson Wyatt, 2004*). Although, most large pension funds are managed by skilled professionals in real estate and are therefore able to invest directly, the global tendency is finding ways to invest in realty in association with specialized entities with significant market experience – property investment companies and managerial societies responsible for real estate funds. This can take various forms, from partnerships designed for a specific project to indirect property investment in the form of fund units or company shares [Machado (2001) and Maurer et al 2002)].

Significant capital inputs have come from abroad, since the 1990's. Many of these investments are also supported on national management and know-how thus raising standards in competitiveness, managerial skills and performance. In spite of this, one can easily conclude from all the above that the market and its players do not have the same kind of maturity and background experience on stable environmental conditions as other reference markets in the EU.

### **3. POSSIBLE SURVEYING APPROACH**

The number of national institutions that actively manage large diversified property portfolios, in a buy- and-hold perspective can be estimated between thirty and forty.

Surveying such a small target population precludes traditional mailing proceedings, like the ones used by *Farragher et al 1996* (to the universe of the largest property investors of the United States) or *Worzala et al 1997* (to the universe of the US pension funds) are not usable here. In fact, for such a reduced population, the sample tends to equal the population in number. Mailing enquiries is therefore not adequate because it would certainly lead to a final set of returned information of not more than 30% of the population, which would not be acceptable for this particular case.

In fact, *Farragher et al 1996* suggest that even if there was a greater percentage of answers returned, two other factors could compromise the credibility of the study – the respondents being biased or non-informed. As for response bias, companies with more sophisticated practices can be more willing to respond than the less sophisticated ones. Regarding non-informed respondents, any uncertainty on the level of responsibility of the respondents in their organization can compromise the acceptance of collected data. Those authors suggest simple tests for bias and non-informed respondents, proving adequate for a larger population. Given the small number of population in the present case, any individual response is of the utmost importance, so that kind of procedure is not suitable.

In view of the above, the most adequate surveying approach is through individual interviews to the chief real estate investment officer of each organization or someone designated for this purpose, given the usual contingencies of these people and the need for completing the survey in a reasonable time period. Furthermore, this will bring obvious added benefits although it may reveal some difficulties.

Such a survey is based on the hypothesis that in any property management organization, all follow the same standards of practice, dictated by the chief real estate investment officer. Accordingly, the population under study is formed by the institutions rather than the professionals, although the survey has to be put to the latter.

This hypothesis is most plausible if one takes into account the rather small number of people employed by most of those institutions, their functional nature and their structure. Moreover, any of these organizations must have, to some reasonable extent, common internal standards, proceedings and control, in order to be able to report performance consistently. The same kind of criteria is reported by authors of similar works, like *Farragher et al 1996* and *Worzala et al 1997*, among others.

#### **4. DEFINITION OF SPECIFIC OBJECTIVES**

Reporting on the quality and sophistication of property investment managers' decision making process can cover many issues. Given the necessarily limited available time of the respondents, priorities must be elected. In this case, the questionnaires were divided into four different sections, each regarding a theme of major importance to real estate asset allocation in practice. Their choice and the election of specific objectives are justified below. In table 1, the relation of these objectives to the final enquiry layout is presented.

##### **4.1 Information**

In an efficient market [Fama, 1970] asset prices reflect all the available information. Real estate markets are usually considered far from efficiency in any form. *Seiler et al 2001*, *Louargand 1997*, *Grissom et al 2001*, *Graff et al 1997*, and many others point out asymmetry of information access as one of the reasons for the specificity of the property market. Unlike stocks, bonds and other securities, real property lacks a central market for global transactions, where information on transactions is provided.

In the real estate market, most important information is collected, treated and made available, under significant cost, by property advisor companies. Time series on market values and indexes, rental rates, vacancy rates, risk and return measures for different types of property are usually available for a fee. Academic research feeds on these databanks in a somewhat costless way, but without access to the whole of the information available. In Portugal, multi-portfolio property databanks built in a consistent way are rather recent, thus yet of relatively limited use. Nevertheless, facts like the entry in the market of multinational property advisor companies, the start of activity of the *Investment Property Databank* (IPD) in Portugal, four years ago, and the creation of the *Lisbon Prime Index* (LPI) create good perspectives for the future, reflecting a need for more a demanding practice based on quality information.

For all the above, knowing the way in which national property portfolio managers consider, gather and processes information is certainly of great interest and was the first objective set for the survey.

## **4.2 Appraisal**

Appraisal is of paramount importance to the real estate market and especially to portfolio managers. Under the impossibility of a continuous public transaction price settlement, like in the securities market, property value must be set through appraisal. Value is in the origin of any performance measure and is of vital consideration in major asset or portfolio management decisions, like acquisitions, disposals, renewals, rentals and many others.

Rules for the appraisal of real estate fund assets are well defined by the market's regulating institution, the *Comissão de Mercados de Valores Mobiliários (CMVM)* – periodicity, qualification of appraisers, standards for appraisal and other. Yearly appraisals are common in most national property portfolios, made at least by two independent appraisers.

However, the global financial market tends to demand more frequent determination of value than for attaining accurate valuation only, and updated performance measurement. In the US and the UK markets quarterly appraisal is the common rule and many portfolio holders make monthly appraisals.

The objective here is to characterize the view of the national real estate portfolio managers on appraisal and appraisers and the current practice of their institutions regarding this subject.

## **4.3 Asset Allocation**

Optimal diversification across different market segments aims at reducing or eliminating risk effects of each specific property and to attain an ideal risk/return relation for a given portfolio.

Asset allocation can be supported by general experience, resulting in intuitive diversification or be based in sophisticated methods using historical results to analyse the characteristics of the

portfolio and its components, thus justifying the reasons behind past performance and providing support for future decisions.

The widespread use of the modern financial techniques such as the *Modern Portfolio Theory* (MPT) [Markowitz, 1952], to the scope of real property, started some 20 years ago [Cheng *et al.*, 2000].

With MPT one can determine an optimal portfolio in an ex-ante perspective, given a set of conditions and a utility function. Many authors however, find the use of MPT not suitable to this asset class for various reasons like non-normality of returns [Byrne *et al.* (1997) and Young *et al.* (1995)], persistence of returns [Lee *et al.*, 2000], statistical indefiniteness of the efficient frontier [Cheng *et al.*, 2000], and others. In spite of this, MPT is widely used [Worzala *et al.*, 1997], and many studies have proved it to outperform naïve diversification strategies [Ong *et al.*, 2000].

In fact, asset pricing and market models based on the mean and the variance as measures of return and risks have proven advantages even if not fully adapted in theory to the behaviour of real estate as an asset class.

For all the above, one of the main objectives of this survey is to determine the level of sophistication of techniques used in by target organizations.

#### **4.4 Opinion on the Organization's Current Practice**

Any good professional must develop some degree of self-awareness, in order to evaluate his/her position in relation to current standards of practice, the general market environment and state-of-the-art.

As a final objective settled, knowledge of the reflexive opinion and perspectives of Portuguese property managers can reveal a lot about the reasons for their actual procedures and the framework for decision making. It can also prove fundamental to foresee possible evolutions in their performance and practice.

### **5. ENQUIRY LAYOUT**

As a preface to the survey some important data on the institution is asked, including the number and volume of funds and assets under management and the number of people involved in asset allocation analysis and decisions.

The main structure of the enquiry is detailed on the table below, and justified against the specific objectives defined.

Table 1: Survey specific objectives and enquiry layout

	OBJECTIVES	ENQUIRIES ON
<b>Information</b>	To find how real estate portfolio managers consider, gather and process information.	<ul style="list-style-type: none"> <li>• Sources of data;</li> <li>• Type of data used or considered relevant;</li> <li>• Use of external databases of relevant historical data supporting management decisions;</li> <li>• Opinion on the availability of information on return and risk measures of property assets;</li> <li>• Willingness for making their own databanks available – terms and conditions.</li> </ul>
<b>Appraisal</b>	To characterize the view on appraisal and appraisers and the current practice of institutions in this matter.	<ul style="list-style-type: none"> <li>• Opinion on whether there is any kind of influence on the appraiser from his institutional client. If so, specify if this influence is consistent and identify most common purposes and effects;</li> <li>• Time period between appraisals and number of independent appraisals per period – current practice, opinion on ideal procedure and future perspectives of evolution;</li> <li>• Conditions for qualifying as appraiser for their institution – former experience, certification, academic degrees or specific formation, following of valuation standards, among others;</li> <li>• Method used for establishing value of property (for return measurement and other purposes) taking as input the result of the appraisals made in the period – use of the average of appraisals, choose the “best” appraisal, choose any value between the maximum and minimum of all appraisals, among others.</li> </ul>
<b>Asset Allocation</b>	To determine the level of sophistication in techniques used	<ul style="list-style-type: none"> <li>• Whether return and risk forecasts are made for each asset prior to acquisition and in what way are they updated during the holding period.</li> <li>• Quantitative risk assessment tools currently used;</li> <li>• Decision variables elected for analysis prior to acquisition;</li> <li>• Types of formal goals settled for the decision variables measuring return and risk, in order to select a suitable investment;</li> <li>• Variables considered to segment the market when deciding on portfolio diversification: type of property, localization, age, size, or others;</li> <li>• Methods/Models used for supporting the decision making process of asset allocation: personal experience, simple correlation of segment returns, market models (betas); portfolio optimization using Modern Portfolio Theory, efficient frontier determination using <i>Fama’s</i> Mean Absolute Deviation as a proxy for risk, among others.</li> </ul>
<b>Opinion on the Organization’s Current Practice</b>	To evaluate self-awareness and perspectives	<ul style="list-style-type: none"> <li>• Personal views of professionals regarding the above issues, namely on how they evaluate their current practice on those issues;</li> <li>• In what way, if any, would they like to improve or change them</li> </ul>



The layout presented is the final version after revision. This has been achieved after a testing procedure, involving sample interviews to selected population members under study. The main aspect improved from earlier drafts was the overall length, in order to reduce the duration of interviews, and the objectivity of questions.

## **7. CONCLUSIONS**

A specific methodology has been developed in order to assess the reality of professional practice among a certain population,

Progress up to this point generally validates the research plan. Starting with careful study of main characteristics and historical background proved fundamental, in order to establish a fully adapted procedure.

Moreover, a specific approach to this case has been developed and justified against information of similar research developed on other realities. Differences aroused have also contributed for justifying the methodology and the relevance of this research.

Election of subjects covered and definition of specific objectives was presented and justified taking into account the current development of real estate research and reports on contemporary practice in international markets.

The testing of the enquiry layout on sample interviews lead to minor revision and improvement. Opinions gathered on these significant contacts confirm the importance of this sort of studies, its innovative nature on a local perspective, and considerable interest on its results was shown. Special attention was raised by the questions on asset allocation techniques and appraisal.

Furthermore, this experience also demonstrated evident need and interest from professionals in having information and research covering the Portuguese reality, thus leading to the conclusion that the theory-practice gap in institutional real estate is also due to the lack of interest and efforts from the national academic community.

Full validation of this research, especially of the methodology presented and conclusions drawn from the work developed, will only outcome from the analysis of aggregate results, to be presented later.

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