

Real Estate Asset Management of German Institutional Investors – Theory and Reality

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Abstract:

The integration of real estate as an asset class into the context of the asset allocation decision-making process is of growing concern to institutional investors in Germany.

Investors holding mixed-asset portfolios in particular are considering new approaches to determine what share of their assets should be allocated to real estate, and how their real estate portfolios should be structured.

The first part of this paper presents a theoretical model of real estate asset management describing the ideal decision-making process. The model takes into account the findings of Modern Portfolio Theory and the empirical evidence of previous studies on the diversification benefits of including real estate. Using a Markowitz optimization model, it can be shown that the inclusion of directly-held German real estate investments and German real

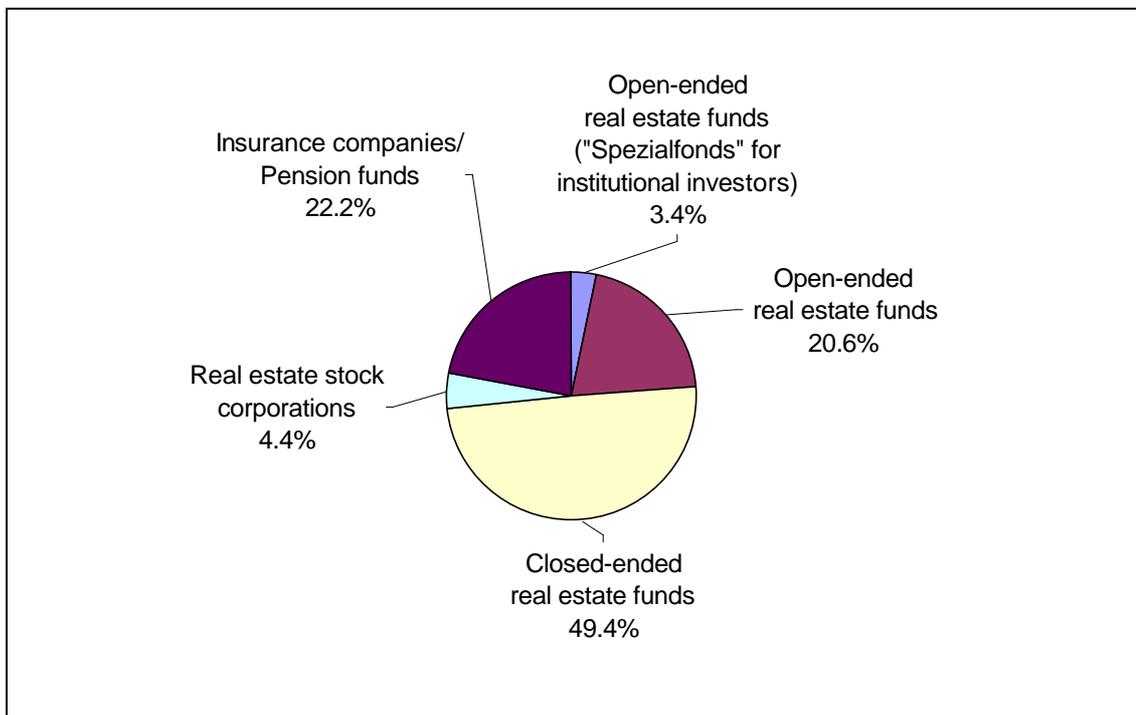
estate shares in mixed-asset portfolios will yield positive diversification effects.

The second part of the paper investigates the actual real estate decision-making process based on the results of a survey conducted among German life insurance companies and pension funds. The survey revealed a significant gap between theory and the reality of real estate asset management as pursued by German institutional investors.

1 Introduction

Among the large institutional investors with real estate assets in Germany we find insurance companies, open-ended and closed-ended real estate funds as well as real estate stock corporations (*Immobilien-Aktiengesellschaften*). Total institutional real estate assets were estimated at some € 207 bn at year's end 2000. Fig. 1 shows a percentage breakdown of institutional real estate assets by investor group.¹

Fig. 1: Breakdown of estimated real estate assets held by German institutional investors, year's end 2000, in %



¹ The estimated real estate assets at year's end 2000 are based on the following data sources: Deutsche Bundesbank, Kapitalmarktstatistik (*Capital market statistics*) Feb. 2001, p. 54 and estimates by Bulwien AG (Real estate assets of open-ended real estate funds, incl. participations in real property companies approx. €42.6 bn, of open-ended real estate funds („Spezialfonds“) approx. €7.0 bn, of German insurance companies €46.0 bn, of closed-ended real estate funds €102.2 bn and of real estate stock corporations approx. €9.2 bn).

While the real estate assets held by German open-ended real estate funds, for example, rose in recent years owing to higher demand, investor groups with mixed-asset portfolios have been experiencing a decline or stagnation in real estate assets since the mid-1990s. A long view, too, reveals a definite downtrend in the asset structure of investors with mixed-asset portfolios. Since the mid-1970s, in fact, the share of real estate investments in the asset portfolios of German insurance companies has steadily lost in importance. Where real estate's share in total investments was still 12.6 % in 1975, the figure was down to a mere 3.1% at year's end 2000.²

This trend can be explained, first, by the fact that developments in real estate investments were unable to keep up with the growth of the asset portfolio as a whole, which grew nearly ten-fold in the same period from € 82.6 bn in 1975 to reach € 817.2 bn in 2000.³

Assuming that the asset structure of institutional investors is not just fortuitous, but an expression of investment behaviour and, hence, the result of a conscious corporate decision-making process, it must be asked whether the decline in the real estate share in mixed-asset portfolios is the consequence of rational decisions in asset management.

If we are to account for the observable behaviour of institutional investors in real property, we must start with a detailed analysis of the underlying decision-making process. This would have to consider how, on the one hand, real estate asset allocation decisions ought to be made as part of an institutional investor's overall asset management process and how, on the other, such decisions are in fact currently taken.

² Cf. BAV, Geschäftsbericht (*annual report*) 1975, p. 11 and Deutsche Bundesbank, Kapitalmarktstatistik (*Capital market statistics*) May 2001, p. 59. These are shares measured in book values.

³ Cf. BAV, Geschäftsbericht (*annual report*) 1975, p. 11 and Deutsche Bundesbank, Kapitalmarktstatistik (*Capital market statistics*) May 2001, p. 59.

The object of the present study is to make a contribution toward explaining the investment behaviour of institutional investors. First, chapter 2 presents a theoretical model of the real estate asset allocation process, which plots the decision-making process as ideal type. Chapter 3 contains the results of an empirical study designed to compile information about the actual real estate asset allocation decision-making process used by German life insurance companies and pension funds. Chapter 4 summarizes the results and looks ahead to asset allocation trends among German institutional investors.

2 Model of the real estate asset allocation process

2.1 Overview of the decision-making process as ideal type

Institutional investors are defined as legal entities which act as financial intermediaries and invest and manage monies on a considerable scale for third parties on a professional basis. The goal and purpose of institutional investors' activity is to invest existing and incoming funds and optimally achieve investment goals, while taking account of any internal and external constraints placed on the company. Performing such complex tasks requires a systematic goal-oriented investment process that covers all decisions connected with the planning, implementation and monitoring of an asset portfolio.

In general terms, asset management tasks can be defined as follows:

- ?? Identification of investment goals and an investor's constraints
- ?? Compilation and analysis of information on investments and markets, and an analysis of the existing asset portfolio
- ?? Development of asset portfolio strategies and selection of an optimal strategy

- ?? Implementation of the strategy in a specific asset portfolio by optimizing the portfolio, and by acquisitions and sales
- ?? Monitoring the strategy's success in terms of effective planning and efficient implementation, possibly involving revision of the strategy.⁴

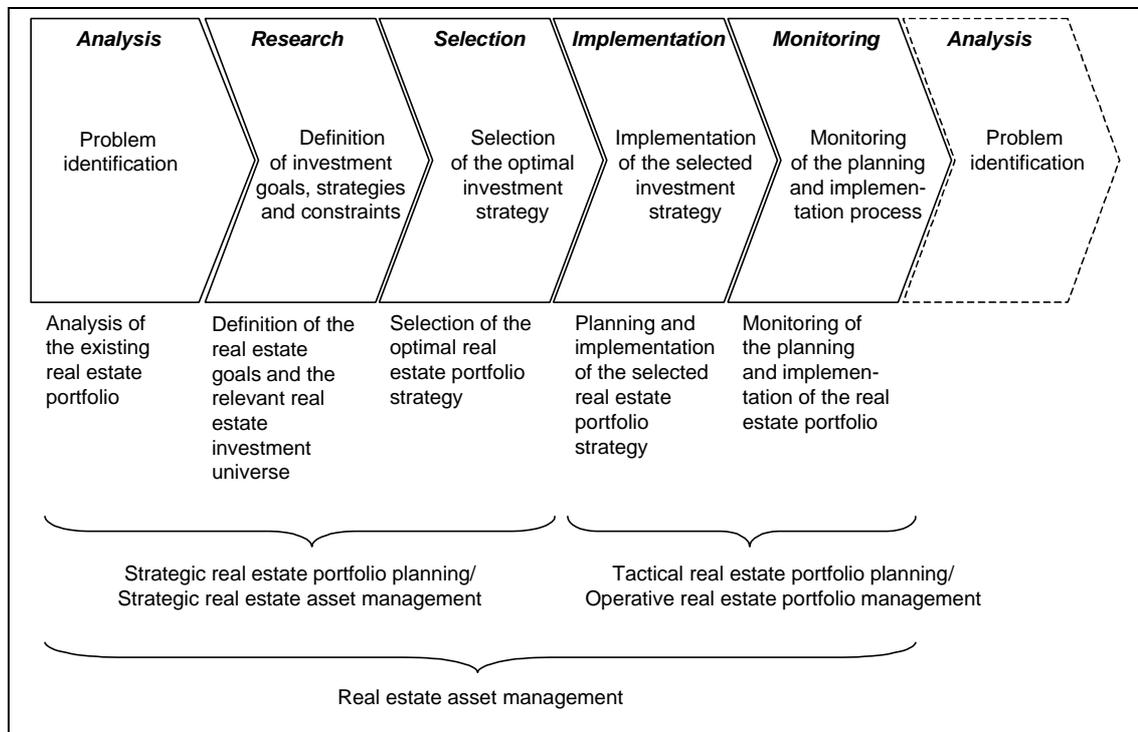
In the world of investments, real estate is an asset class which, if included in any decisions on asset structure, may form part of an investment spectrum relevant to a particular investor. The decision to invest in real property must be viewed as one option among many in the overall asset allocation decision process for institutional investors and must consider the following questions in particular:

- ?? Are investments in real property to be a part of the asset portfolio as a general principle?
- ?? What share in value terms are real estate assets to have in the asset portfolio as a whole?
- ?? What structure is needed for the composition of the real estate portfolio, e.g. with a breakdown by investment form or in terms of regional and sectoral spread?

The various steps in real estate asset allocation decisions are shown below in the form of a decision-making model as an ideal type:

⁴ Cf. Sharpe/ Alexander/ Bailey, Investments, p. 882.

Fig. 2: Process phases in real estate asset allocation decisions



The following account focuses in particular on the strategic portfolio planning stages, so that the implementation and control phases can only be touched on briefly.

2.2 Analysis of the real estate portfolio

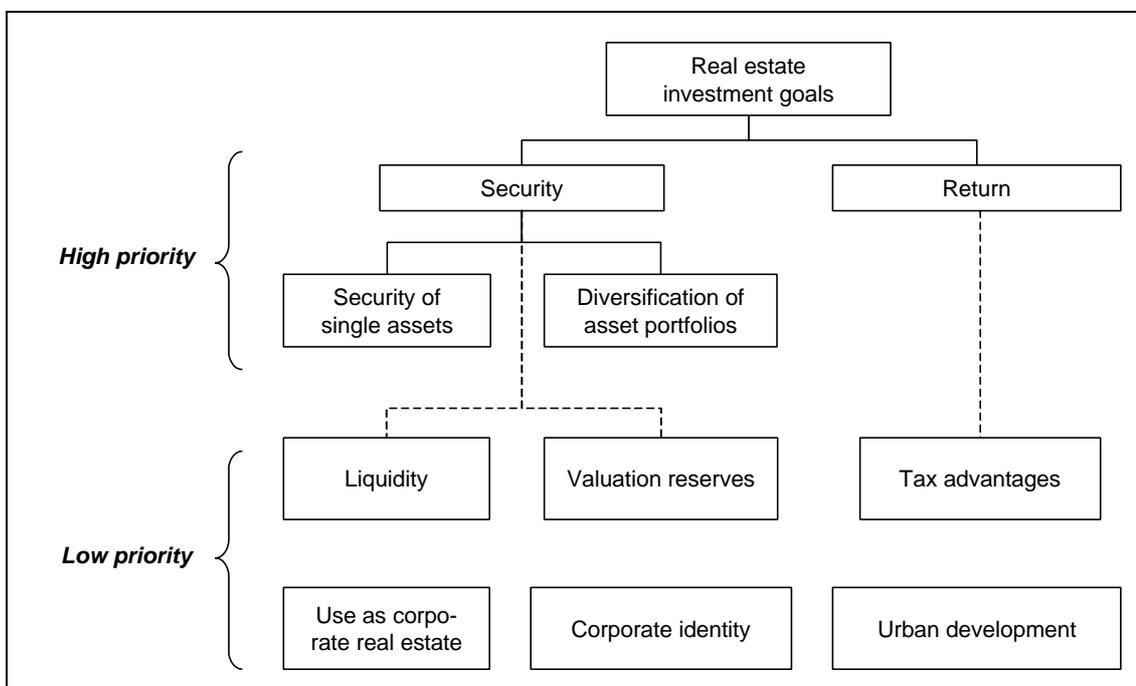
For institutional investors, the optimal shape to be given to asset portfolios is a recurring problem owing to the continuous fluctuations in capital flows. Frequently, the investor already has a real estate asset portfolio, and a thorough analysis of this is an important base-line for the decision-making process. This will be dealt with in more detail when the implementation phase is described.

2.3 Investment goals

2.3.1 Goal hierarchy

Based on a formulation of the problem, the investment goals must be given concrete shape as regards content, desired degree of goal achievement and time horizon. The goals for real estate investment are derived, to start with, from the general goals set for the investment as a whole and then supplemented by further goals specific to investment in real estate.

Fig. 3: Goal hierarchy for real estate asset allocation decision



Various interdependencies exist between the different goals pursued in real estate investments. The return goal and the security goal, for example, may clash, making simultaneous maximization or minimization of goals impossible. For the sake of reducing the complexity of the goal system, the following remarks are confined to the main goals of security and the return on the investment. The remaining goals would have to be examined to

ascertain the extent to which they can be considered as constraints when it comes to formulating goal function and delimiting possible options for action.

In a next step, the goals set for security and the return on investment in real estate assets must be operationalized using goal criteria that allow measurement of the degree of goal achievement.

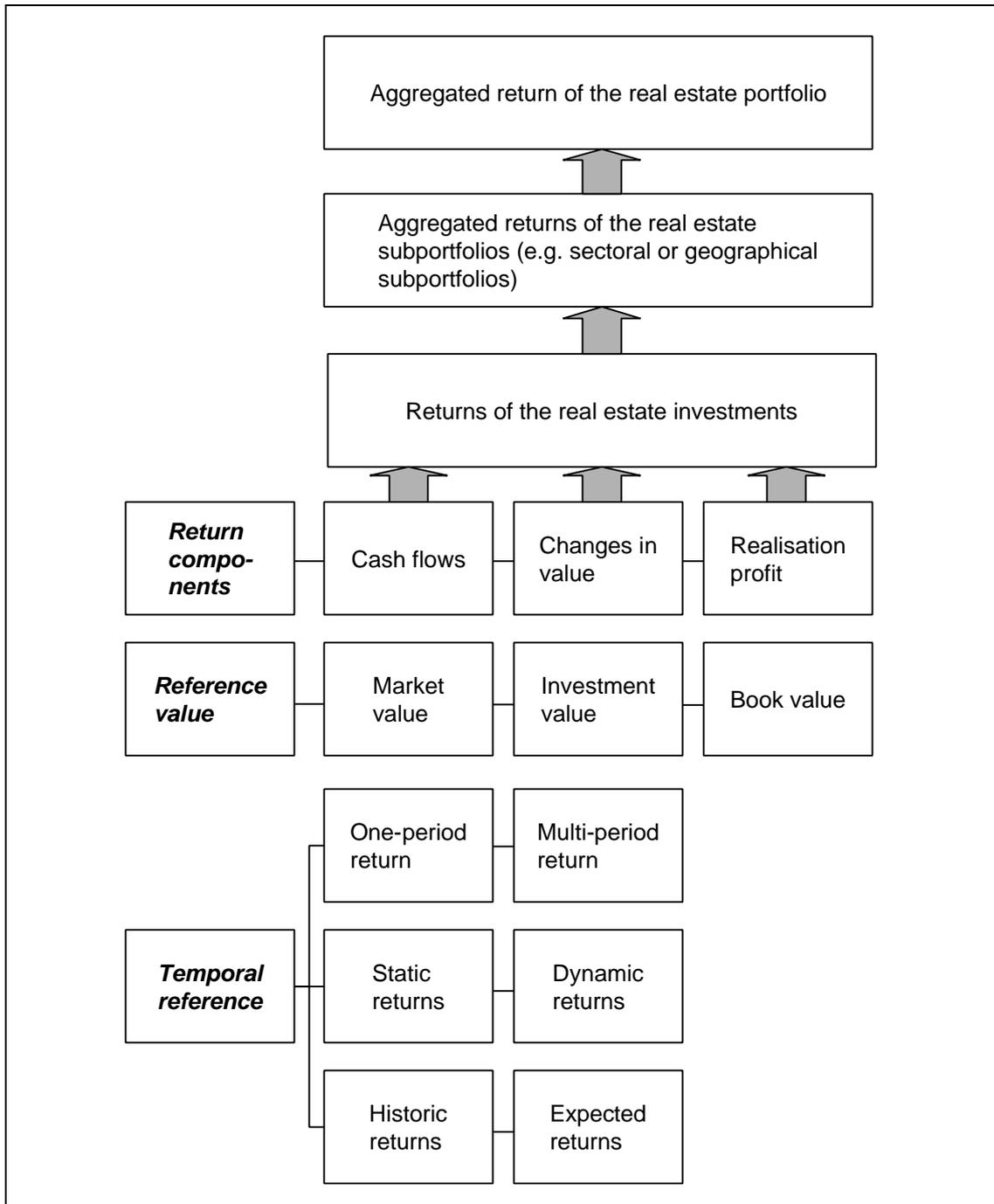
2.3.2 Return goal

For calculation of the return in terms of the relative performance of real estate investment, a number of procedural variants are available which can be classified as regards the type of data base used, temporal reference and aggregation level. Fig. 4 gives a schematic overview of the various levels and components concerned in calculating returns.

The method employed for calculating returns in portfolio planning must meet the following requirements:

- ?? Definition of return ratios on the basis of forecast data
- ?? Derivation of returns based on market data for the performance and reference variables
- ?? Approximation of the calculation method used for the return on investment in real estate to that employed in other asset classes with a view to ensuring the comparability of return ratios and integrating real estate investments into asset allocation models

Fig. 4: Levels and components in calculating returns⁵



⁵ By analogy with Hall, Measurement, p. 379.

?? Recording of all performance components in real estate investment; i.e. in addition to periodic cash flows, it is also necessary to consider changes in value. In recording inflows and outflows, the return formula also has to take account of their occurrence over time. The calculation of changes in value for the period under review and the reference variable for determining the return must be based on the realized market values or on appraisal-based values of the real estate.

?? Regular calculation of the precise return variables for the period under review must be based on a uniform scheme.

2.3.3 Security goal

The security of real estate investments as a further main goal in a decision-making situation marked by uncertainty can only be defined by establishing the degree of risk in the investment. This requires risk analyses that identify and quantify the relevant risk factors. For investments in real estate, three risk dimensions are of particular importance:

?? the inflation hedge in real estate investments

?? the volatility of real estate returns

?? diversification benefits of real estate investment at portfolio level.

The inflation-hedge properties of real estate investments have been the subject of numerous empirical studies in the Anglo-American area, most of them based on regression analyses used to determine the link between developments in real estate returns and inflation.⁶ In Germany, only a few

⁶ For empirical studies on the inflation-hedging characteristics of real estate see e.g. Barkham/ Ward/ Henry, inflation-hedging, 1996; Matysiak et al., long-term, 1996; Hoesli et al., Short-term, 1997; Stevenson, performance, 1999.

studies exist on inflation hedges.⁷ A comparison of the returns in the German Real Estate Index (*DIX Deutscher Immobilien Index*) make it clear that the average real estate returns in the sectoral sub-indices and the index portfolio as a whole were usually well above the inflation rate, so that it was possible to obtain positive returns in real terms in the period reviewed.

Table 1: Comparison of the DIX total returns and inflation in Germany, 1996-1999⁸

DIX Total Returns	1996	1997	1998	1999
Retail	5,1%	6,4%	5,2%	4,6%
Office	4,2%	3,1%	4,8%	5,5%
Residential	-2,3%	6,0%	3,8%	5,0%
Retail/ Office	2,4%	2,1%	4,0%	3,1%
Other	3,0%	4,5%	4,1%	4,4%
All Property	3,4%	3,7%	4,7%	5,1%
<i>Inflation Rate</i>	<i>1,4%</i>	<i>1,9%</i>	<i>1,0%</i>	<i>1,2%</i>

For a quantitative measurement of volatility risks, preference goes to statistical parameters like standard deviation and semivariance, which map the deviation of the expected return from the average expected return or a target return. These also form the basis for analysing the diversification effects at portfolio level.

The volatility risk and the diversification effects of German direct and indirect real estate investments were analysed in this study using German open-

⁷ Cf. Maurer/ Sebastian, Analyse, 2000.

⁸ In 1999 the data base for the DIX property index comprised 953 properties, representing a market value of € 18,7 bn. The data for the index is delivered on a yearly basis by the participating companies (mainly German real estate funds, insurance companies and pension funds). The DIX property index measures unleveraged returns on direct investment in properties held through the year. Additional impacts on investment returns of transactions and development are not included. DID, DIX, 2000.

ended real estate funds for the period 1990-1998 and, in the case of German real estate shares, for the period 1989-1999.

The data basis for this was formed, first, by the annual returns of German open-ended real estate funds as published in their annual reports, adjusted for the impact of liquidity reserves. The total returns established in this way can be used as a surrogate for direct real estate investments. Second, use was made of German real estate shares as representatives of indirect real estate investments, whose performance is mapped with a sufficient degree of precision by the E&G DIMAX index. The E&G DIMAX is a performance index of leading German real estate shares, established each trading day on the basis of spot rates.

Besides the average returns and volatilities of real estate investments, the study established the co-variances between real estate and shares and between real estate and bonds. For shares and bonds, the data base was formed by the major German performance indices, DAX or CDAX (shares) and REXP (bonds).

The following results were obtained from an analysis of open-ended real estate funds and real estate shares:

Table 2: Average returns, standard deviations and correlation coefficients for shares, bonds and real estate

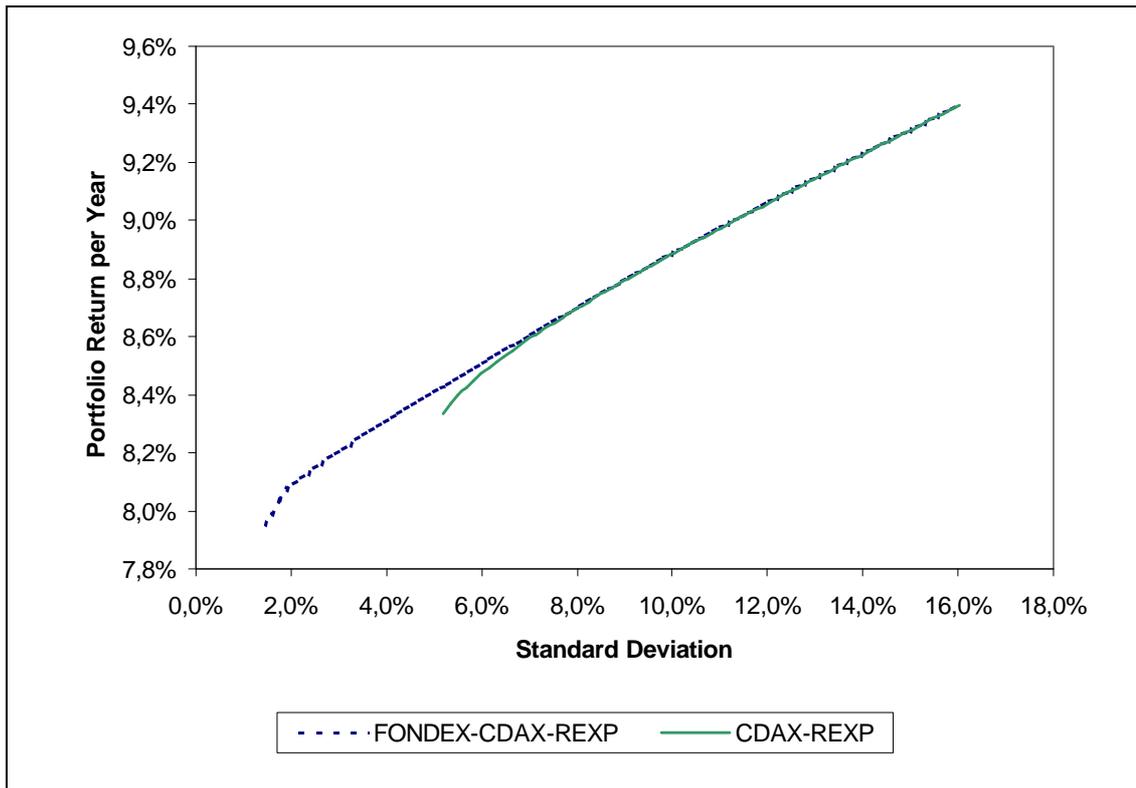
Correlation Coefficients	Direct real estate (FONDEX)	Shares (CDAX)	Bonds (REXP)
Direct real estate (FONDEX)		-0,65	-0,32
Shares (CDAX)			0,3
Annual average return (1990-1998)	7,78%	9,40%	8,20%
Standard deviation	2,38%	16,02%	4,90%

Correlation Coefficients	Real estate shares (DIMAX)	Shares (DAX)	Bonds (REXP)
Real estate shares (DIMAX)		0,33	-0,09
Shares (DAX)			0,29
Monthly average return (1989-1999)	1,11%	1,23%	0,57%
Standard deviation	3,73%	5,93%	1,03%

To start with, the results confirmed the positive link between an investment's return and its risk. The correlation coefficient indicates a definitely negative correlation for the returns of direct real estate investments and shares in the period under review, and a slightly negative correlation for real estate and bonds. As expected, real estate shares have a slightly positive correlation with other shares and correlate only just negatively with bonds.

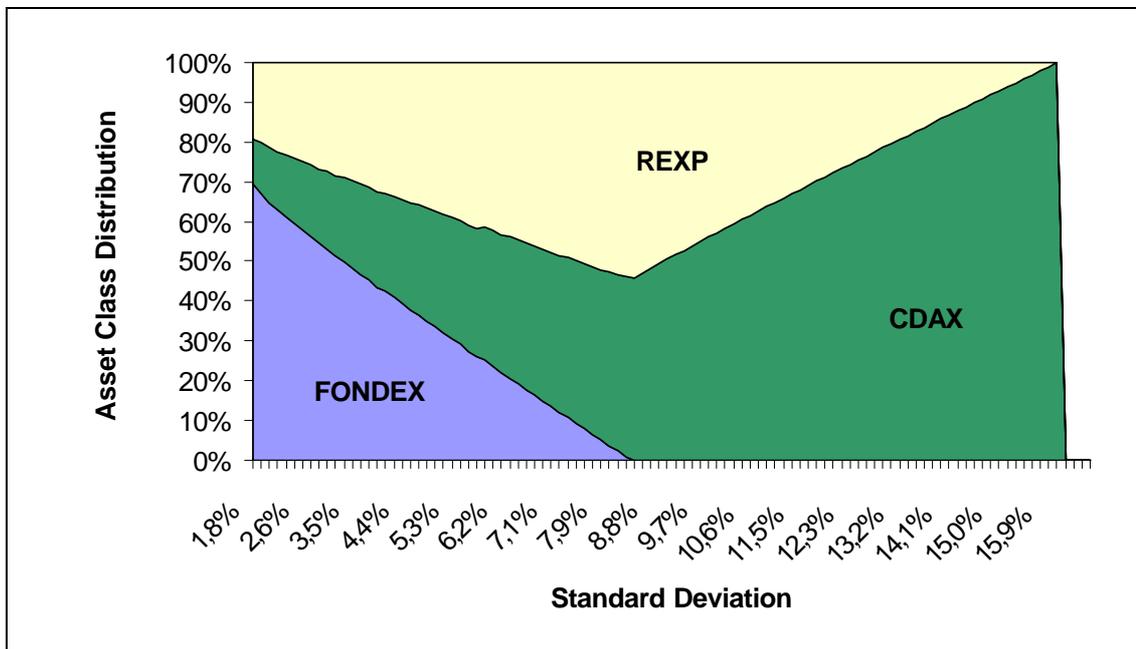
To check diversification effects, a classic Markowitz optimization was performed⁹, and it yielded the following efficient frontiers for mixed portfolios with and without direct real estate investments.

Fig. 5: Efficient frontiers for mixed portfolios with and without direct real estate investments



⁹ For a description on the method of calculating optimization, cf. Byrne/ Lee, Computing, 1994 and Byrne/ Lee, Portfolio, 1994.

Fig. 6: Composition of efficient portfolios with direct real estate investments



The graph shows that the efficient portfolios analysed in this study contain a large share of real estate especially in the range of low standard deviations. As for the diversification benefits of direct real estate investments, a comparison of the efficient frontiers demonstrates that, based on the three asset classes examined, a build-up of efficient portfolios with a standard deviation in annual portfolio returns of less than 8 % could only be achieved in the period from 1990 to 1998 by admixing direct real estate investments. This being so, the benefit derived from admixing direct real estate investments is mainly to be found in the realizability of efficient portfolios with lower risk levels than those that could be obtained without a real property component.

The following results were obtained for the diversification effects of German real estate shares in mixed portfolios:

Fig. 7: Efficient frontiers for mixed portfolios with and without indirect real estate investments

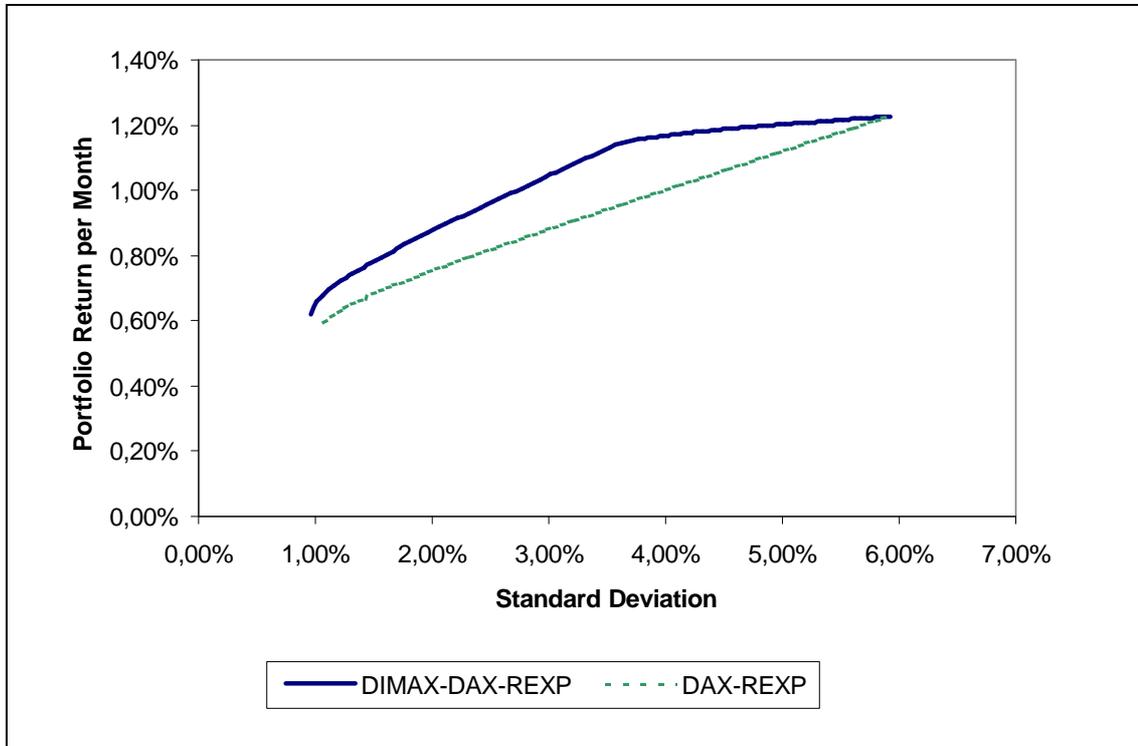
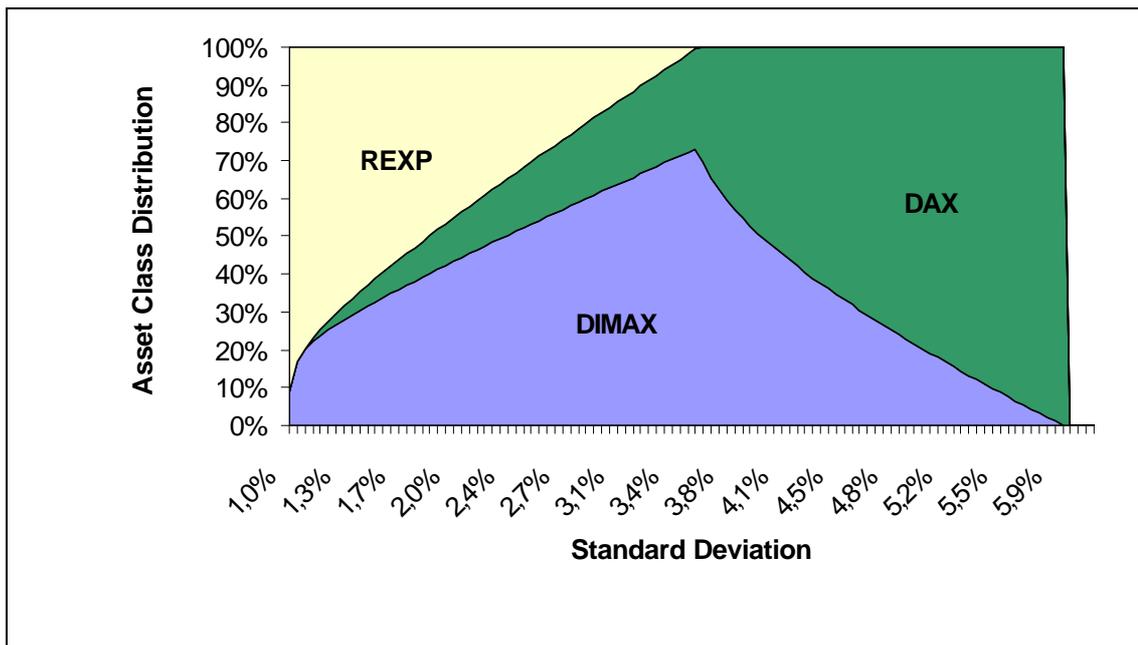


Fig. 8: Composition of efficient portfolios with indirect real estate investments



A comparison between the efficient frontiers of straight share/bond portfolios and those of portfolios with an additional real estate component shows a striking dominance of the latter portfolios. In the period 1989-1999, these consistently earned higher returns than portfolios without a real estate component, though exposed to the same risk level.

Unlike the diversification effects of direct real estate investments, however, admixing real estate shares cannot extend the range of realizable risk levels. The structure of efficient portfolios shows that, as portfolio risks rise, real estate shares start by successively replacing bonds. Upward of a standard deviation of approx. 3.5 % per month, however, the share of real estate shares begins to drop again and the portion of other shares increasingly dominates the portfolio.

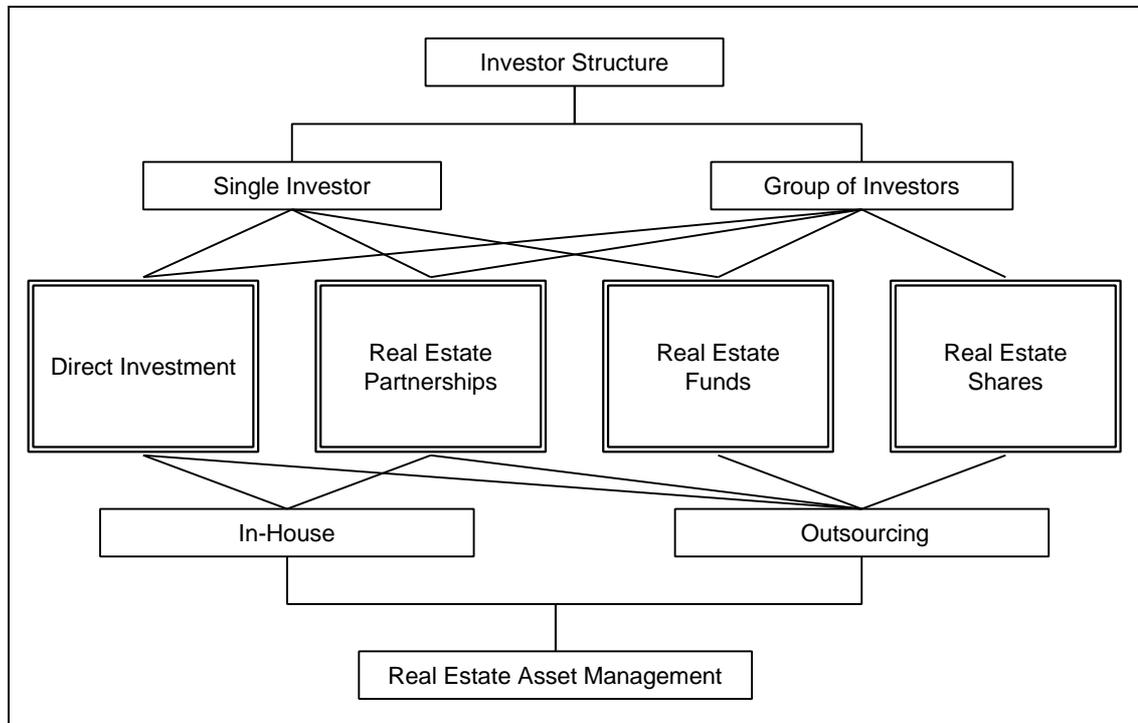
2.4 Options for action

Once the target system is defined, the next step in the decision-making process involves examining the options for action. In the decision on real estate investments in the overall planning of a company's asset portfolio, the options for action involve drawing up different asset portfolios. Here, we find an infinite range of real estate portfolios for every decision-making deadline, varying in the size of the real estate component in the overall portfolio and in the composition of the real estate portfolio. The spectrum for the real estate component's relative share in the overall portfolio ranges from non-inclusion (omission option) all the way to investment of a company's entire capital in real property.

In Germany, institutional investors generally choose between four basic forms of real estate investment, and they are currently the most important in their portfolios. In terms of investor structure, these basic forms can be broken down into individual and collective investments and, in the

organization of the real estate asset management, into third-party and in-house managed investments.

Fig. 9: Basic forms of real estate investment



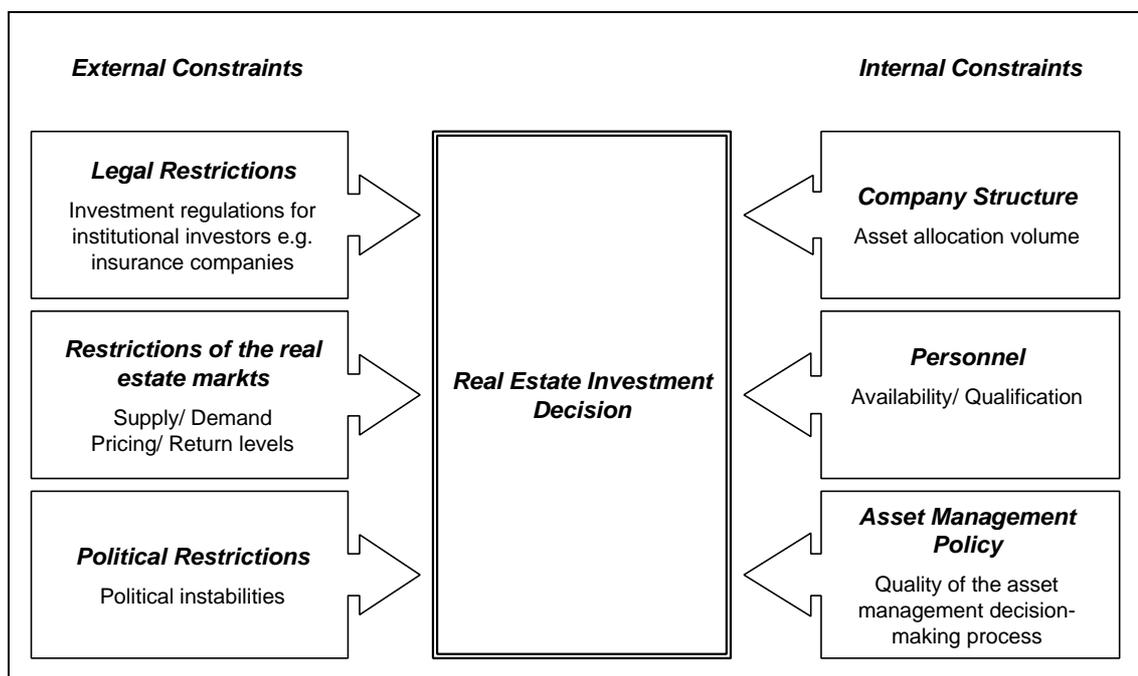
In recent years, so-called „Spezialfonds“ in particular have been gaining in importance for institutional investors. These are a specific form of legally regulated open-ended real estate funds for institutional investors. By contrast with open-ended retail funds, the circle of investors is limited to a maximum of ten shareholders who must not be natural persons.

2.5 Constraints

After the options for action have been defined, the next step is to examine any constraints on real estate investment. This will reduce the number of options for action by excluding those that cannot be implemented or are undesirable.

Constraints on real estate investment may be due, on the one hand, to exogenous factors that an investor cannot directly control, e.g., legal restrictions, the state of real estate markets, or political influence on companies' asset management policy. There are also internal constraints due to a company's specific character, like investment volume and the availability of real estate know-how.

Fig. 10: External and internal constraints in real estate investments



As regards the form of the investment in real property, the key internal constraints include available investment volume or the size of the real estate portfolio, and the quality of portfolio management. On the basis of the different characteristics of these factors, we can derive standard strategies for the form to be given to real estate investments:

Fig. 11: Standard strategies for real estate investments

<i>High</i>	Real Estate Funds	Real Estate Partnerships/ Direct Investment	Direct Investment
<i>Medium</i>	Real Estate Funds	Real Estate Partnerships/ Real Estate Funds	Direct Investment
<i>Low</i>	Real Estate Shares/ Real Estate Funds	Exit-Strategy or Acquisition of Know-how	Exit-Strategy or Acquisition of Know-how
	<i>Low</i> (<50 Mio. €)	<i>Medium</i> (50-200 Mio. €)	<i>High</i> (>200 Mio. €)
	Real Estate Investment Volume per Year		

2.6 Decision criteria

In the selection phase, based on decision-making rules, the alternative to be chosen from among the remaining options must be the one that optimally meets the investment goals pursued by the investor. Starting out from the defined goals for an investment, there is the question of the yardstick for assessing the options for action as regards the degree of goal achievement, and how the selection of the option with optimal goal achievement can be carried out on a methodological basis.

The assessment and selection criterion must meet the following requirements:

- ?? Appraisal of the options for action using the selected goal criteria and the defined goal function
- ?? Comparability of the selection method with the procedure used in other asset classes, heeding the special features of real estate investments
- ?? Unequivocal definition of the portfolio structure with optimal goal achievement
- ?? Match between the appraisal criterion and the pursued investment policy (active v. passive investment policy).

In the ideal type, the decision on the optimal real estate component in the overall portfolio and the definition of the optimal structure for a real estate portfolio, e.g. as regards its regional and sectoral spread, should be made simultaneously. However, owing to the complexity of the problems involved in decision-making, this is difficult to achieve in practice, so that a two-tier procedure commends itself. Still, the optimization processes at the overall portfolio and real estate portfolio levels are interdependent. The weighting of real estate investments in the overall portfolio, for example, depends on the return/risk properties of the real estate portfolio which, in their turn, depend on the return/risk properties of the real estate investments contained in the portfolio. Conversely, any decision on the share of real estate investments in the overall portfolio has repercussions on the composition of the real estate portfolio, specifically on the form of real estate investments.

As regards the structure of real estate portfolios, the following methods used in portfolio planning were examined to assess their suitability.

Table 3: Methods in portfolio planning¹⁰

Asset Management Policy	Method	
	Traditional	Modern
Active	Best-Deal Strategy	Modern Portfolio Theory
Passive	Buy-and-Hold Strategy	Indexing

In the past, the investment policy pursued by German institutional investors was marked, on the one hand, by a strongly return-g geared opportunistic procedure for acquisitions as a best-deal strategy. At the same time, a passive portfolio management adopted a buy-and-hold strategy involving very long holding periods and little portfolio restructuring. Only in recent years has an awareness grown among German institutional investors that real estate portfolios require active management if their performance is to be optimized.

A scrutiny of the methods employed shows that conventional procedures contain serious flaws. Relative to modern methods, the lack of a representative index for the German real estate market is a problem when it comes to implementing an indexing strategy. In the German Real Property Index (*DIX*), a first step has been taken toward solving this data problem. Under current conditions, use of the portfolio selection theory looks like the most interesting approach. Besides the theoretical difficulties involved in applying this approach to real property as an asset class, however, the still inadequate availability of data in Germany is an obstacle to its implementation here. Initial application of this approach to asset allocation decisions is currently under trial in practical operations in Germany.

¹⁰ Cf. Lottenbach, Anlageentscheidungsprozeß, p. 70.

2.7 Implementation

The result of the portfolio planning process is the definition of an optimal real estate portfolio structure for investment goals. In view of the special features of real property as an asset, no restructuring of existing or buildup of new real estate portfolios can be implemented in the short term. Hence, the aimed-at portfolio is strategic in nature, i.e. it has long-term targets. The job of tactical portfolio planning is to define implementation steps that allow the target portfolio to be approached in one year, say. The concrete implementation of these steps is a task for operative portfolio management, whose remit includes the acquisition and sale of real property and the management and optimization of the portfolio at the level of the individual real estate investment.

The precondition for implementation is a detailed analysis of the existing real estate portfolios to determine whether they fit into the profile of the target portfolio. On the basis of these analyses, the portfolios can be segmented as follows, for example:

- ?? Real estate investments which fit into the structure of the target portfolio and have an optimal return/risk profile
- ?? Real estate investments which fit into the structure of the target portfolio, but still have optimization potentials in terms of performance
- ?? Real estate investments which do not fit into the target structure of the portfolio.

In the case of the last two categories, a next step must involve a definition of measures to optimize or sell the investments. Besides an optimization of existing real estate portfolios, acquisition strategies must be identified which permit a medium-term approximation of the portfolio structure to the target structure.

2.8 Control

The final stage in the decision-making process is the control phase which monitors goal achievement by making an actual/target comparison. First, controlling a real estate investment process will address the portfolio planning and include checks of the efficacy of the assessment and selection criteria. Second, it will vet the efficiency of the operative portfolio management in the execution phase, which can be measured, for example, by the progress made in achieving the set goals.

Any discrepancies revealed by checking the process and implementation may require a revision of the planning results and, hence, form the point of departure for a new round of decision-making.

The outline of the phases shows that this process does not involve one single decision, but a complex conglomerate of individual decisions, since each stage of the process brings a host of decisions which themselves require a decision-making process. Also, the process is not a one-off affair, but must be viewed as a recurring cycle due to the manifold interdependencies existing between the process phases.

3 Empirical studies on the real estate investment behaviour of German life insurance companies and pension funds

3.1 Study subject

The asset management process described in chapter 2 can be applied, in its general form, to the investments of all institutional investors. However, the various groups of institutional investors differ in their investment goals and in the underlying conditions of the investments. This being so, it appears meaningful to analyse in greater detail the real estate asset allocation decision-making process by taking a limited group as an example for study. The selected group in the present case was that of the life insurance

companies and pension funds based in Germany. The following reasons can be given for this restriction:

- ?? Insurance companies form one of the biggest investor groups in Germany in terms of investment volume.
- ?? Relative to the group of all insurance companies, life insurers and pension funds are marked by a comparable product structure - viz. long-term life insurance policies - so that largely congruent investment targets and horizons may be assumed.
- ?? Life insurance companies and pension funds account for 74,5% of real estate investments in the German insurance industry.¹¹
- ?? Life insurance companies and pension funds hold mixed-asset portfolios, so that we can depict the entire process of real estate investment planning, from planning the structure of the real estate sub-portfolio all the way to determining the share of real estate investment in total investments.

3.2 Structure of the poll

In autumn 1999, a written poll was conducted among German life insurers and pension funds aimed at collecting data on the practice of real estate asset allocation decisions.

Questionnaires were sent to 119 life insurers and 140 pension funds. The relatively small target group of 259 firms reflects the high degree of concentration in the German insurance sector: in terms of the asset portfolios of all insurance companies in Germany, the share of the polled firms accounted for some 70%. The serviceable feedback comprised 37

¹¹ This percentage is the result of the sum of land and land rights as well as shares in special real estate assets held by German life insurers and pension funds at year's end

questionnaires, equivalent to a feedback ratio of 14.3%. In spite of the small number of serviceable questionnaires, the companies included in the random sample represent 62 % of the real estate investments held by German life insurers and pension funds.

The variables examined in the questionnaire can be broken down into three categories:

- ?? General data variables characterizing the examined companies
- ?? Behaviour variables, which can be assigned with regard to their content to the following categories based on the theoretical decision-making model: investment goals, definition of profitability, risk gauging, constraints applicable to a real estate investment, decision criteria
- ?? Result variables, reflecting the bottom line of the actual decision-making process.

3.3 Results of the poll

The results of the poll yielded a number of propositions on the decision-making process adopted by German life insurers and pension funds for real estate asset allocation decisions. The propositions can be summarized as follows:

- ?? The goals in real estate investment largely coincide with the general goals of any investment. As regards the weighting of real estate investment goals, profitability and security are the most important, followed by the mixture and spread of the investment, and the option of forming hidden reserves. In terms of targets, the aim is to achieve maximized returns on the real estate investment subject to certain ancillary conditions being met.

1999, relative to the corresponding position of all direct insurers in Germany. Cf. BAV, Geschäftsbericht (*annual report*) 1999, p. A28.

- ?? In determining the profitability of real estate investments, preference is given to the method of internal interest rates. Returns are usually calculated at yearly intervals in the form of annual returns. Rent income is based on the contractually agreed rents for real property in third-party use. The management cost types taken into account as outlays in calculating returns include admin, operating and repair costs as well as any risks of loss of rent. The value of direct investments is established annually, mostly based on the gross rental method. The companies calculate aggregated returns for the entire real estate portfolio and also for sub-portfolios. In assessing the return of the real estate portfolio as a whole, use is frequently made of the average return on all a company's investments as a control variable. One benchmark usually employed for the returns on individual real estate investments is provided by the returns on comparable in-house real estate investments.
- ?? The security of real estate investments is generally considered to be high, with recurrent income and potential value increases being of special significance for investors. Correspondingly, the risks in real estate investments are considered medium to low. Compared with shares and participations, the risk in real estate investments is regarded as being lower and, in the case of claims secured by mortgages or land charges and debentures, as being higher. Account is taken of the risks involved in real estate investments by spreading the investments between regions or sectors and by excluding risky investment forms.
- ?? As external constraints, investors mostly cite the availability of suitable investment properties and the prospective returns on real estate investments. Further restrictions inside Germany are associated with corporate decision-making processes for asset allocations and with a company's investment volume. In the case of investments abroad, one primary perceived constraint is in the know-how of employees. Portfolio planning, controlling in real estate investment and property valuations are core areas in real estate asset management, most of which are performed in-house.

- ?? Decisions on the size and structure of a real estate portfolio are usually taken at Board level. In this respect, the predominant criterion for any decisions is the expected return on the real estate investment. Where a precisely formulated, written strategy exists for the real estate portfolio, it contains data on a breakdown by investment form, region and sector, and by investment volume in the various properties. Strategy planning periods cover three to five years as a general rule; on average, strategies are adjusted every two years.
- ?? As to the future performance of real estate investments, three typical strategies can be distinguished: conservative buy-and-hold, dynamic growth and disinvestment.
- ?? Existing real estate portfolios are marked by high sectoral concentration with focuses on residential and office use types and on mixed-use properties. In their regional distribution, the portfolios centre on a few areas in Germany. Dominant investment form is direct investment in built-up land, most of it in third-party use. As regards the volumes of the various real estate investments, the focus is on properties with a market value below DM 10m. Investment holding periods, which can be calculated from the point in time of acquisition, are very long.
- ?? Only half of the companies perform a benchmarking of their portfolios.

4 Summary and outlook

As yet, the process of real estate asset allocation decision-making, as described in chapter 2, does not appear to be very widespread in practice. In fact, the results of the empirical study indicate that the planning process for real estate portfolios is in reality a mixture involving a long-term oriented, passive buy-and-hold strategy. This is suggested by the long holding periods of the real estate investments and an alignment to the return as the goal-setting and decision-making criterion. Investment risks are mainly targeted

by spreading the investments in a sort of naïve diversification. However - at least as regards their geographical spread – this contradicts the empirically observed, high regional concentration of real estate investments.

In view of the tougher competitive pressures encountered in the insurance sector, it may be expected that performance orientation in asset management will continue to grow in importance. As a consequence, real estate investments will increasingly have to face competition from other asset classes. With a view to obtaining a meaningful comparison, an alignment of the return and risk measurement to the established measurement variables and the methods used for other asset classes seems indispensable. In this way, real property as an asset class can be integrated into the overall process of investment planning and freed from its life in the shadows as a residual variable in asset allocation.

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