

Institutional Real Estate Investment Practices: Swedish and United States Experiences

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Abstract. In recent years, institutional real estate investment activity has experienced major changes in many countries throughout the world. In Sweden, large-scale investment projects have increasingly been dominated by several major financial institutions. As in other places, real estate investment analysis in Sweden has undergone considerable change in terms of rigor, focus, and perspective. This study is the first effort ever to systematically assess the current situation in the market for commercial real estate in Sweden. The study presents the results of a comprehensive 1988 survey of over 200 commercial real estate investment participants in Sweden including insurance companies, pension funds, construction firms, property management firms, and investment companies. The survey results are compared with results reported in the United States and elsewhere within the corporate and real estate capital budgeting literatures. The results reported here can thus be compared cross-sectionally as well as over time across numerous dimensions.

Introduction

In recent years, real estate investment activity has experienced major changes in many countries throughout the Western world. In Sweden, the market for investment-grade property has grown together with a major economic restructuring towards a society increasingly focused on information and service. The market has become dominated by institutional investors including pension funds, insurance companies, and organizations and foundations as well as publicly and privately held real estate holding, management, development and construction companies. As in other places, real estate investment analysis in Sweden also has undergone considerable change in terms of rigor, focus, and perspective. The increased integration of real estate into the recently deregulated capital markets has further amplified this change. This study is the first systematic attempt to assess this situation.

Many previous studies on institutional investment behavior outside Sweden have traditionally focused on capital budgeting techniques with relatively little effort expended at viewing this activity in terms of differences in business goals and management framework. However, the need for this broader perspective has been recognized by some authors.¹

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The study presents primary survey data on 215 commercial real estate investment participants in Sweden. The survey has generated information about the structure of real estate portfolios, the use of analytical techniques, various investment concerns, and operational methods used in the acquisition, monitoring, and disposition of real estate investments. The survey's response rate is encouraging and a close review of the results reveals several interesting and important findings, especially given the comparative results in other sectors of business throughout the world, the real estate market in the United States, and reported findings in other countries. In addition, the paper provides a review of the literature of previous surveys including those reported for corporations, multinational firms, and in foreign countries. Thus, the new results found in our survey can be compared cross-sectionally and over time on many dimensions.

The Swedish Real Estate Investment Scene

Real estate has been one of the favorite investment vehicles during the 1980s in Sweden. Rents for commercial space have consistently outperformed inflation attracting various income-seeking investor groups to the real estate market.² The strong rental performance was reinforced by the earlier abolition of commercial rent controls which had created substantial pent-up demand for rent corrections on presently expiring long-term leases.

The restructuring toward a more service-oriented economy also has created considerable new demand for commercial real estate. The sustained inflation in Sweden strengthened the view of real estate as an inflation hedge. Many financial institutions seem to have discovered that throughout the 1980s they held surprisingly small real estate portfolios relative to stocks and bonds.³

Rising rents have been accompanied by even faster rising sales prices, especially at prime locations. Insurance companies and pension funds have been keenly competing for the best investment-grade properties by pressing their capitalization rates down relative to other investments, as illustrated in Exhibit 1.⁴ Other buyers included property-holding companies as well as construction/development companies seeking profit centers in operations and value enhancements through capital improvements.

High prices and low capitalization rates have virtually excluded those buyers seeking regular return and leverage. The market has become dominated by all-equity institutional investors seeking placement for their equity positions funded by the increased inflow of insurance and pension premiums as well as the new issues of stock capital.⁵ This process has effectively reduced the turnover of prime property and has shifted some investment interest towards smaller cities, farm and forest properties, and investments abroad.⁶

Investor search for real property has been accompanied by the search for risk reduction in these investment portfolios. Risk diversification attempts apparently have been undertaken but little is known yet about the extent and the type of diversification criteria.⁷ Also, financial markets in Sweden have undergone substantial deregulation during the mid-1980s after decades of strict controls.⁸ Mortgage finance has increasingly become integrated within general credit markets. High real interest rates have attracted corporate retained earnings to mortgage finance inducing the

Exhibit 1
Interest and Dividend Return on Stocks and Real Estate in Stockholm



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increasing use of mortgage-backed securities, interest-rate swaps, options, and futures. Much interest has also been focused on sale-leaseback deals although not without some controversy.⁹

An Overview of the Capital Budgeting Surveys

Ever since the appearance of Joel Dean's influential *Capital Budgeting* in 1951, a major focus of financial management has been on the capital budgeting decision. With all of the attention directed at prescribing normative investment rules, it soon became apparent that a check was needed to see if the prescription was being applied in practice. By the 1970s, the literature was ripe for formal surveys about management practice of capital budgeting techniques and methods.

Indeed, the literature has progressed so far in this area that there is now a literature on the capital budgeting literature (i.e., there exist surveys of the surveys!). While most of the surveys have taken place in the United States where much of the growth of formal capital budgeting procedures has taken place, there is also a parallel development in the U.K. Similarly, there are hints of the same discussion in other European countries as well.

Some General Observations

Despite all of the attention paid to the capital budgeting decision over the past thirty years, one would think that few controversies would remain unsettled. However, this does not seem to be the case. For example, in 1985, the *Harvard Business Review* published an article that argued that the practice of capital budgeting was far from perfect.

Recent critics of American business are want to claim that our managers rely too heavily on a few financial techniques in weighing major investment decisions. Calculation of discounted cash flow, internal rates of return, and net present values, say the critics, is inherently biased against long-term investments. According to the authors of this article, the technicians, not the techniques are the problem. (Hodder and Riggs, 1985, p. 128)

Furthermore, the authors dismiss the recent criticism of American business practice of emphasizing short-term effects at the expense of long-term projects due to a reliance upon discounted cash flow techniques. Criticism of capital budgeting practice is a time-honored tradition and in recent years, there have been substantive questions raised about a variety of issues.¹⁰ Nevertheless, despite the litany of criticisms, the evidence is overwhelming that the trend toward more sophisticated techniques exists in virtually every market throughout many industrialized countries.

A Review of the Criticisms. One of the criticisms in the literature by Howe (1984) is the fact that there is still (at least as of 1984) no unified descriptive model of capital budgeting. Most of the suggestions are normative in nature and describe practice as if it were in a vacuum. There have also been numerous criticisms aimed at design

deficiencies in the capital budgeting process. For example, Pinches (1982) argued that while the techniques themselves are acceptable, the problem rests with "the myopic or short-sighted view of capital budgeting held in both the business and academic communities." In another critique, Rappaport (1979) argued that surveys of capital budgeting practice are likely to overstate the percentage of firms using discounted cash flow techniques and the relative importance of the techniques by the nature of their inquiry. Finally, Holder and Riggs (1985) questioned whether the scientific model of decisionmaking was sufficient even if these and other problems could be resolved.¹¹

Surveys of Capital Budgeting Practice

There have been numerous questionnaires and surveys of practice since the early 1970s. Most of the important ones are identified and reviewed below. One of the first articles in the finance literature to recognize the divergence between theory and practice in the area of capital budgeting was Mao's 1970 study (see Mao, *Survey of Capital Budgeting Theory and Practice*). He observed differences between what was being taught and implemented in four areas: (a) while the conceptual goal of the firm was similar in theory and practice, the notion of risk was different, (b) in practice, risk adjustments were made by modifying the discount rate rather than by comparing variances, (c) diversification and portfolio risk was not readily implemented in practice despite the theoretical development that had already been underway in theoretical finance for much of the previous decade, and (d) the use of discounted cash flow models was limited; practitioners continued to prefer the payback method as an investment criterion.

The first of the modern capital budgeting surveys was conducted in 1969 and published in 1972 by Klammer (see Klammer, *Empirical Evidence*). This survey set the stage for many others that were to follow. Klammer reports that nearly every firm dealt with risk but only 39% indicated that formal models were used. As of 1969, respondents reported that the use of cash flow techniques was growing and reliance upon the payback method was diminishing.

In 1973, the results of a 1971 survey appeared in a study by Fremgen (see Fremgen, *Capital Budgeting Practices*). Using 250 business firms from Dun and Bradstreet's list, Fremgen reported results for all of the leading capital budgeting criteria including the accounting rate of return, payback method, the internal rate of return, net present value, benefit cost ratio (profitability index) and other methods. The respondents indicated a preference for the payback method and the internal rate of return. In terms of risk analysis, shortening the payback period and adjusting the discount rate were the most popular methods.

From 1975 through 1986, at least *ten* additional surveys of *only* U.S. corporate capital budgeting practice have been published. These include studies by Brigham (1975) using 33 firms as case studies, Petty, Scott and Bird (1975) who surveyed Fortune 500 firms in 1971, Petty and Bowlin (1976) who surveyed Fortune 500 firms on the use of quantitative methods, Gitman and Forrester (1977) who surveyed major U.S. firms, Schall, Sundem and Geijsbeek (1978) who surveyed over 400 firms, Kim and Farragher (1981) who surveyed 1979 firms and compared their results with previous findings, Moore and Reichart (1983) who developed a 1980 questionnaire,

Farragher (1986) who surveyed non-industrial firms, Kim, Crick and Kim (1986) who used another survey, and Ross (1986) who completed a field study of 400 projects of a dozen firms.

A comparison of these surveys reveals an intuitively appealing finding: *capital budgeting practice, despite the criticisms and the apparent indifference to performance has continued to grow in sophistication and toward more theoretically preferred methods throughout most of the surveys.*

In general, the thrust of the surveys has always been in the same direction: practice is "improving" and techniques are becoming more widespread. However, like the studies about the importance of the methods relative to performance, researchers have not been able to show, for example, that the existence of risky projects leads to the reliance upon better capital budgeting methods (see Schall and Sundem, 1980).

There is also a small set of surveys of multinational firms regarding capital budgeting practice. Following an earlier 1966 study, Oblak and Helm (1980) provided results for multinationals. Similar surveys were conducted by Bavishi (1981) and Stanley and Block (1984). The evidence for multinational firms parallels that for U.S. companies: discounted cash flow models are used extensively but payback continues to maintain its attractiveness.

There are representative surveys from other nations as well. In France, Pares (1974) conducted a survey patterned after the 1972 Klammer study. In the U.K. Pike's 1980-81 survey served as the standard for many years (1988). Baker (1981) conducted a survey of West European practices, and subsequently in 1984, he compared practices between European and American firms (see Baker, *Capital Budgeting*). Baker's results support the belief that capital budgeting practice has similarities across cultural and international boundaries. Jones (1986) examined U.K. practices via two questionnaires in 1975 and 1981 and found little change over time.

Capital budgeting practice is not limited to private firms and corporations. Kee, Robbins and Apostolou (1987) examined capital budgeting practices of 200 budgetary officers in U.S. cities with populations greater than 50,000 people. The results indicate a lower reliance upon sophisticated capital budgeting techniques compared with corporate, multinational, or international surveys of current or even earlier times. A commentary by Doss (1987) argued that government officials have been slow to adopt modern techniques because the benefits come in the future and risk is involved when making the investments.

There is also a set of "surveys of the surveys".¹² This is a proxy for the level of synthesis that has occurred in this literature.

Real Estate Surveys

The literature contains at least five surveys of practice among real estate firms and institutional investors. The trend among real estate investors is consistent with the results of previous surveys.

Wiley's (1976) study involved responses to a 1972 questionnaire of institutional real estate investors. The findings reported differences between before-tax and after-tax evaluation techniques. In addition, the return on equity was emphasized by investors, cash flows were important and discounted cash flow models were becoming widespread.

Subsequently, Farragher (1982) conducted a similar survey and concluded that at least relative to Fortune 500 firms, many real estate investors were not using the available quantitative methods. As in Wiley's results, a variety of real estate measures and criteria were reported.

Page (1983) followed up the earlier studies and attempted to identify potential impacts of the 1981 Tax Reform Act. Page's results show an increased use in sophisticated methods since Wiley's study and also, a greater reliance upon after-tax analyses than previously reported. The rise of microcomputers as important tools of analysis is also reported.

Webb (1984) continued the line of survey research by expanding the questionnaire mailings to almost 900 insurance companies. The results indicated a continuing trend toward more and greater sophistication in methods, risk analysis, and computerization. In addition, there is evidence that risk analysis was being examined more critically by investors.

In a parallel study, Webb and McIntosh (1986) surveyed REITs on the same grounds as the previous study regarding techniques used, computer usage, risk analysis, and other items. They found virtually identical results as reported in Webb's earlier study. Boykin (1986) conducted his own comparisons of appraisal methods. He reported a growing convergence of methods between investors and appraisers.

Surveys of corporate real estate asset managers also have been done. Farragher (1984), McIntosh, Davidson and Albert (1987), and Redman and Tanner (1989) all report moves toward increasingly sophisticated measures.

Overall Assessment

In general, the trend in real estate follows the same path as the trend elsewhere toward reliance upon more sophisticated methods and toward an increased reliance upon techniques that are consistent with real estate theory. It appears that surveys of practising decisionmakers have brought forth surprisingly little. Firms have long relied upon that with which they were comfortable: formerly, the accounting rate of return and the payback method and currently, the internal rate of return and the payback method as a supplementary tool. With developments in the theory of capital budgeting throughout the 1960s and 1970s and changes in business school education and technology (including reductions in computational costs through sophisticated calculators and later microcomputers with electronic spreadsheets), it is reasonable to expect that capital budgeting practice would move in the same direction. The latest surveys suggest that practice has moved a long way, especially in the implementation of quantitative and sophisticated techniques and analyses.

On the other hand, the literature has been unable to show the importance of changes in capital budgeting practice with respect to corporate profitability. Nor has the literature been able to convince academicians that their primary focus on the selection aspects of capital budgeting is too narrow a view. It may well be true that other aspects of the capital budgeting process are equal to or even more important than selection, but this has not led to a revolution in capital budgeting theory or instruction.

The Swedish Study

The present survey has obtained responses from institutional investment-property investors in Sweden. The selection of survey questions reflects both the need for comparability with other studies of investment behavior and the authors' special interest in viewing real estate investments within the context of decision-support information processing with efficient integration of management, market, and portfolio considerations.

The survey instrument consisted of a comprehensive questionnaire sent to approximately 350 companies deemed to be investors in income-producing real estate.¹³ The respondents included companies who deal with insurance and pension funds, property holding companies, construction/development firms, property management firms as well as various foundations and other organizations. Of the 350 companies that received the survey, 215 responded. While the precise estimate of the true response rate is difficult to know since the target population is unknown, the authors believe that this response was a sufficient one for the purposes of this study.¹⁴

Analysis of the Results

There are no significant differences between the aggregated results and those for the numerically dominant response group of property-holding companies. Results are also provided for a subgroup of property-holding companies and construction/development firms that are traded on the Stockholm stock exchange. This decision was motivated by a suspicion of highly probable behavioral differences. For example, the companies traded on the stock exchange are required to manage and report their affairs in a specific and well-defined manner that might be sufficiently different from the procedures followed by other companies.

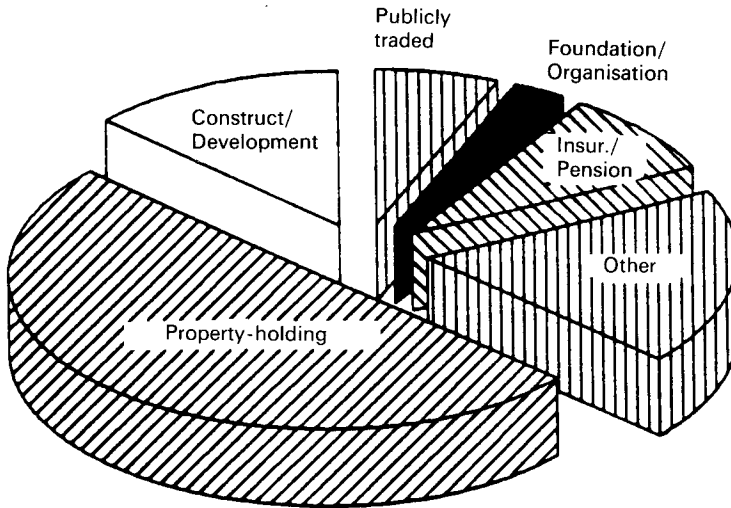
Investor Profiles

Exhibit 2 shows the breakdown of respondents by company profile. The largest number of decisionmaking units (62%) were represented by the broad group called "property-holding companies". The second largest group consisted of construction/development companies (23%) some of which also reported property-holding and property management activities especially during periods of low construction activity.¹⁵ There were also nineteen publicly traded real estate companies equally represented by property-holding and construction/development profiles. These firms constitute a separate group in the reporting.

Real Property Portfolios

A somewhat different picture is found by breaking down real estate ownership by volume rather than by decisionmaking units. A few investors might own large portfolios having thus made a far greater number of investment decisions than the

Exhibit 2
Company Profiles by Proportional Breakdown

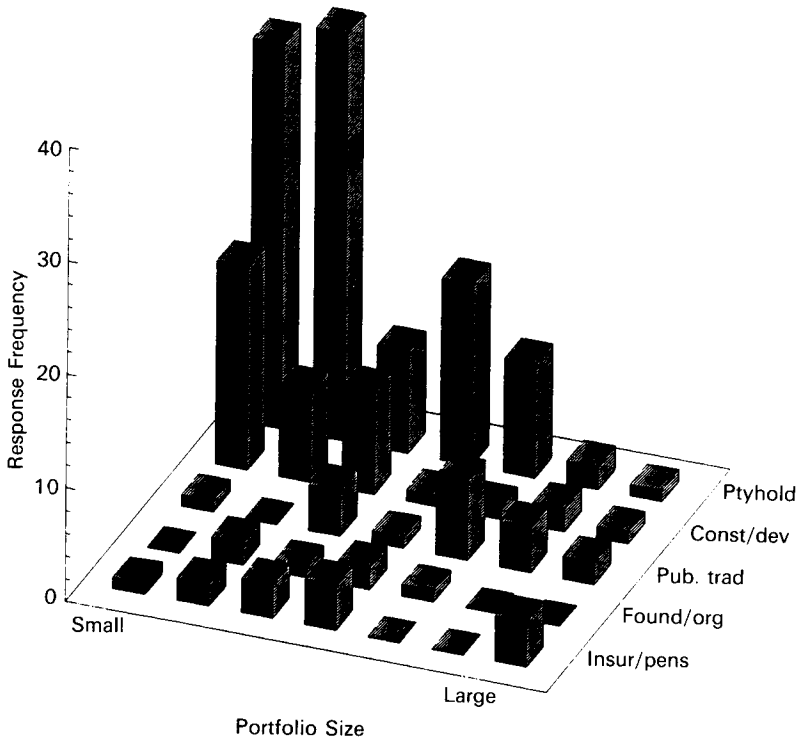


more numerous smaller companies. Exhibit 3 presents the breakdown by portfolio size of major company profiles.

The largest portfolios were held by insurance/pension companies, construction/development firms, and holding companies. Further investigation of the later two categories reveals that most of these were publicly traded corporations. The bulk of decisionmaking units was found in property holding companies and construction/development firms with portfolios not greater than 250 million Swedish crowns (or about \$40 million).

The respondents were asked which property types they had in their portfolios. Exhibit 4 indicates clearly that the two most popular property types were by far office/retail and apartment properties.¹⁶ The third most popular property type was, somewhat surprisingly, industrial real estate, representing 50% of the reporting rate. The rate was the highest for publicly traded real estate corporations with almost 80% of them reporting ownership. The next group consisted of shopping centers, hotels/motels, and vacant land with a reporting rate of about 20%. Shopping centers and hotels/motels were favored heavily by publicly traded real estate corporations with a 50% reporting rate. Vacant land was favored, as expected, by construction/development firms. Farm/forest and special-purpose properties were owned by about 10% of the respondents. Farm/forest properties were relatively more popular with foundations/organizations and publicly traded real estate corporations (15% to 20%). Special-purpose properties were attractive mostly to foundations and organizations indicating an expected strong correlation between the purposes of the property and its holder.

Exhibit 3
Portfolio Size and Company Type



It is interesting to note differences between the holdings reported by real estate firms in the United States and Sweden. These differences, although not great in some categories, imply differing institutions between the countries.¹⁷

Business Objectives

The respondents were also asked about major business objectives or profit centers they sought for their real estate investments. Exhibit 5 presents the results. As expected, the business objective of construction/development was chosen by the majority of construction/development companies and publicly traded real estate corporations (70%). Value-enhancing renovation and remodeling were also within the domain of construction/development companies (70%) and, to a lesser degree, publicly traded real estate corporations (58%) and property-holding companies (47%). Property management was most popular with property-holding companies (80%), publicly traded real estate corporations (74%), and even construction/development companies (68%).

Exhibit 4
Reporting Rate for Property Types by Company Profile

Property	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organisation
Apartments	84	93	75	90	67
Office/Retail	95	100	79	80	83
Shopping Center	53	29	18	18	17
Industrial	79	57	54	58	50
Hotel/Motel	47	29	19	20	33
Farm/Forest	16	7	5	8	17
Vacant Land	32	21	17	36	17
Special Purpose	5	14	1	4	33

*Figures refer to proportions of respondents in each category.

Exhibit 5
Major Business Objectives

Objectives	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
Construction/Development	74	7	23	72	0
Renovate/Remodeling	58	14	47	70	17
Property Management	74	43	80	68	17
Capital Placement	5	71	21	12	67
Trading	21	7	20	12	0
Other	16	7	13	6	33

*Figures refer to proportions of respondents.

On the other hand capital placement was listed by a majority of insurance/pension companies as well as by foundations and organizations (71%). Property trading, or owning with capital gain objectives, was not very popular. Only property-holding companies and publicly traded real estate corporations listed this objective in significant numbers (21%). Other business objectives were most frequent amongst foundations and organizations (33%).

These results do not reveal any difference with what was expected to be the major business objectives of different company types. They confirm the expectation that respondents provide realistic answers to such questions. Perhaps the most interesting finding is that construction/development companies seek profit centers not only in construction/renovation activities, but also in property-holding and management. This illustrates that effort to hedge against construction instability due to exogenous shocks to the economy. Readers may be interested in drawing comparisons with the experience of the United States, where, for example, appreciation is likely to be a more predominant objective as reported in previous studies.

Exhibit 6
Ranking of Investment Aims of Respondents*

Investment Aim	Publicly Traded	Insurance/ Pension	Property Holding Co.	Construction/ Development	Foundation/ Organization
Long-term Real Return on Equity	2/3	1	1	1	1
Regular Return on Equity	2/3		3	3	
Value Appreciation	1	3	2	2	
Tax Benefits					
Risk Diversification		2			3
Other					2
Rank 1/Rank 2**	1.5	1.8	1.2	1.4	4.0

*Respondents were asked to rank the alternatives on a 1–2–3 scale with 1 representing the “most preferred” choice and 3 the “least preferred”.

**The ratio “Rank 1/Rank 2” indicates the degree of dominance by Rank 1 over Rank 2 choices. The higher the figure the more powerful the first choice and the weaker the second choice. This is a quick proxy for a significance test on ranking differences between the first and the second choices.

Investment Aims

The respondents were also asked to rank their investment goals or objectives. Exhibit 6 presents these findings. While the previous exhibit indicated that the business objective of construction/development was chosen by the majority of construction/development companies and publicly traded real estate corporations (about 70%), value-enhancement through renovation or remodelling was also under the domain of construction/development companies (70%) and, to a lesser degree, for publicly traded real estate corporations (58%) and property-holding companies (47%). Property management was most popular with property-holding companies (80%), publicly traded real estate corporations (74%), and even construction/development companies (68%).

Exhibit 6 indicates that the investment aim of long-term real return on equity was by far the main choice for all company types except for publicly traded real estate corporations (who listed it as a second/third choice). The aim of regular return on equity (equity dividend or cash-on-cash return) was a third choice for property-holding and construction/development companies and a second choice for publicly traded real estate corporations. The aim of value appreciation was ranked second by construction/development and property-holding companies, first by publicly traded real estate corporations, and third by insurance/pension companies. Risk diversification was second in importance for insurance/pension companies, and third to publicly traded real estate corporations and foundations/organizations.

Surprisingly, tax benefits were not highly ranked by any of the respondent groups. This may partly be explained by the generous rules in Sweden for the reporting of results by companies subject to taxation. The results reveal interesting differences among respondent groups, as well as some common characteristics. Relative un-

importance of the aim of the return on equity reflects the trend toward more emphasis on value appreciation potential especially by insurance/pension companies and publicly traded real estate corporations. This trend may partially be ascribed to the substantial investment demand experienced by the investors who are willing to bear higher risks as long as they invest in prime locations. This may also reflect taxation rules on common stocks of publicly traded real estate corporations, who try to show modest dividends and would rather give their shareholders higher capital gains later.¹⁸

The proxy for significance test on differences between first and second rankings reveals that foundations/organizations appear most clear about their primary choice of long-term real return on equity. Strong views were also held by insurance/pension companies with the long-term real return on equity strongly dominating the second choice of risk diversification.

Thus, the ranking of investment aims for the total of respondents, dominated numerically by property-holding companies, was as follows:

1. Long-term real return on equity,
2. Value appreciation,
3. Regular return on equity (equity dividend or cash-on-cash return).

In comparison with the United States, the focus is on the same items, but the emphasis historically has been on the current rate of return relative to appreciation potential.

Recent Investment Trends by Property Type

The respondents were also asked to rank their recent investments by property type. This question was included in order to check whether there was some change in emphasis in new acquisition activities compared to the existing portfolio composition. The results are presented in Exhibit 7. This table shows a fairly clear pattern of recent

Exhibit 7
Ranking of Latest Investments by Property Type

Property Type	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
Apartments	3	2/3	2	2	2
Office/Retail	1	1	1	1	1
Shopping Center					
Industrial	2	2/3	3	3	3
Hotel/Motel					
Farm/Forest					
Vacant Land					
Special Purpose					
Rank 1/Rank 2*	2.1	3.2	1.1	1.1	2.3

*The ratio "Rank 1/Rank 2" indicates the degree of dominance by Rank 1 over Rank 2 choices. The higher the figure, the more powerful the first choice and the weaker the second choice. This is a quick proxy for a significance test on ranking differences between the first and the second choices.

Exhibit 8
Risk Diversification Strategies*

Diversification Strategy by:	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organisation
% Using Diversification	79	57	46	54	67
Property Type	63	63	69	74	25
Geographical Location	68	63	62	48	75
% of Portfolio	26	50	26	30	0
Mix Equity and Mortgage Investment	0	25	0	4	0
Other	5	13	8	4	0

*Figures refer to proportions of respondents using diversification.

acquisition trends by property type. Office and retail space remain the first choice for property types for all investor groups. This result confirms apartments as the second choice except for the publicly traded real estate corporations (who listed apartments as the third choice and the second choice went to industrial property). The third choice was given to industrial properties with insurance/pension companies¹⁹ and publicly traded real estate corporations making it their second choice.

Therefore, the results of rankings of investments by property types for all the respondents (but dominated numerically by property holding companies) was as follows:

1. Office and Retail,
2. Apartments,
3. Industrial.

What is somewhat surprising is that apartments are still a strong choice among commercial property investments in a country with a long history of rent controls that remain in force today. One possible explanation is that rent controls lead to a lower level of construction and subsequent lower vacancy rates, which in turn, lowers the risk of these investments. Institutional investors seeking low risk vehicles may be attracted to such properties. Another explanation might be that construction/development companies are looking for value-enhancement potential through renovation which has been given generous interest-subsidy financing by the state during the 1980s. One additional explanation is that many respondents still build apartments with favorable government subsidies and then decide to retain the properties for management profits.²⁰

Diversification Strategies

Even though risk diversification was not highly listed among the explicit investment aims (except for insurance/pension companies and publicly traded real estate corpor-

ations), the respondents reported a frequent use of risk diversification strategies. Exhibit 8 provides the findings in this area. The exhibit reveals that the highest usage of diversification strategy was reported by publicly traded real estate corporations (at almost 80%). This was followed by foundations/organizations (at about 67%). What is perhaps most surprising here is that insurance/pension companies reported relatively low usage of explicit risk diversification: (only 57%). Some explanation for this may be that these companies tend to invest in investment-grade prime-location real estate which implicitly carries the lowest business risk.²¹

Diversification by property type was most popular with construction/development companies (almost 75%), while diversification by geographical location was most popular with foundations/organizations and publicly traded real estate corporations (70%). Construction/development companies used geographical diversification relatively infrequently (about 54%) which may reflect the fact that many of them have a clearly local focus and prefer to retain the various property types that are built.²²

The mixing of equity and mortgage investments in Sweden was found only at negligible levels. Only insurance/pension companies reported any noticeable use of this strategy (about 25%). This contrasts starkly with the widespread use of this strategy in the U.S.A.²³ The explanation for this phenomenon may be that financial institutions in Sweden tend to indirectly invest in bonds issued by mortgage banks or in mortgage-backed securities rather than directly in mortgages.

The use of risk diversification strategies for the total of respondents (although dominated numerically by property-holding companies), was as follows:

1. Property type diversification (60%),
2. Geographical diversification (57%),
3. Diversification by percentage of portfolio (22%),
4. Other diversification strategies (10%),
5. Diversification by mortgage-equity mix (3%).

Adjustment for Risk at Acquisition Time

A related question is that of the favored adjustment for risk differences across property types and locations prior to an investment decision. The respondents were asked to specify whether they explicitly adjusted for risk differences and if so, which techniques were used. The findings are presented in Exhibit 9. This exhibit reveals that explicit risk adjustments are very popular among the respondents with the highest rate reported by publicly traded real estate corporations (95%). The most popular risk adjustment technique is changing the required rate of return (75% to 90%), except for insurance/pension companies (67%) who prefer changing the expected benefit stream (83%). This is conditioned by these companies' guidelines on required rates of return that are used in their investment calculus.²⁴

The use of other risk adjustment techniques was also quite high. Sensitivity analysis was used more frequently by publicly traded real estate corporations, property-holding and construction/development companies (65% to 70%). The frequent use of this technique may have been facilitated by the apparently widespread use of computers even in smaller companies. Probability judgments were used more

Exhibit 9
Explicit Adjustment for Risk at Acquisition Time*

Explicit Adjustment for Risk	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
% Using Risk Adjustment	95	86	80	76	83
Required Return	89	67	75	82	80
Expected Benefits	44	83	75	82	40
Sensitivity Analysis	72	58	68	66	20
Probability Judgments	50	50	66	74	40

*Figures refer to proportions of respondents using risk adjustments.

frequently by property holding and construction/development companies (65% to 75%). What is perhaps most interesting is that probability judgments were as popular as sensitivity analysis with most respondents. This may reflect the frequent use of qualitative (probability) judgments in the decisionmaking process of many companies.

The use of explicit risk diversification techniques was reported by 80% of all respondents. The choice of techniques was the following among the total of respondents:

1. Adjustment in expected benefit streams (75%),
2. Adjustment in required rate of return (74%),
3. Sensitivity analysis (65%),
4. Probability judgments (64%).

There is little doubt that the use of sophisticated risk analysis is more widespread in Sweden than in the United States. None of the real estate surveys reveal similar levels of usage for any of these techniques. While risk analysis is held to be important in both countries, it appears that explicit analysis is far more prevalent in Sweden than in the United States.

Calculation Horizon

The respondents were asked about the length of investment time horizon used in their calculations. Exhibit 10 presents these results, which clearly indicate that most investors favor a time horizon between two and ten years (50% to 75%). Insurance/pension companies prefer longer time horizons of eleven to twenty years (about 65%) which is consistent with their focus on long-term real returns on equity.

The total figures for all responses indicate the following ranking:

1. Horizon of two to five years (67%),
2. Horizon of six to ten years (65%),
3. Horizon of one year (37%),

Exhibit 10
Calculation Horizon Used in Investment Calculus*

Calculation Horizon	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
1 year	42	29	39	38	33
2-5 years	63	50	70	76	50
6-10 years	74	79	63	56	67
11-20 years	11	64	30	32	33
21 + years	5	21	14	14	7

*Figures refer to proportions of respondents.

Exhibit 11
Before-Tax Investment Criteria*

Investment Criteria	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organisation
% Using Before-Tax Investment Criteria	84	86	72	65	33 (2 resp.)
Price/Gross-Rents	69	33	75	67	0
NOI/Price	88	50	81	70	100
NOI/Initial-Equity	75	67	73	67	50
BTCF/Initial-Equity	50	25	63	48	0
Equity Payback	25	33	34	39	0
PV of Equity	44	42	41	42	0
PV of Total Capital	50	67	37	42	0
IRR on Equity	50	50	49	55	50
IRR on Total Capital	63	58	43	52	0

*Figures refer to proportions of respondents using before-tax criteria.

4. Horizon of eleven to twenty years (33%),
5. Horizon of over twenty years (17%).

Compared with the planning horizons among United States investors, these findings indicate similar, if slightly longer, holding periods. Clearly, the data indicates that some holding periods in Sweden are very long compared to those reported by surveys in the United States. These differences most likely stem from institutional factors in the respective economies.

Before-Tax Criteria

The results on the use of before-tax investment criteria are shown in Exhibit 11. They show that the use of before-tax investment criteria is quite common with the highest rate reported by insurance/pension companies and publicly traded real estate

corporations (84%), and the lowest use by construction/development companies (65%).

These results also indicate some important differences by type of investor. The most popular criterion is NOI/Price although there are wide differences. The highest rate was reported by foundations/organizations (but only two responses) and publicly traded real estate corporations (almost 90%), followed by property-holding companies (more than 80%), and construction/development companies (70%). The lowest relative use of NOI/Price was reported by insurance/pension companies (at only 50%). The large difference between publicly traded and insurance/pension companies may depend on the differences in the use of leverage effects. The publicly traded companies have to produce dividends while the insurance/pension companies have no such requirements on direct returns.

Other popular criteria included NOI/Initial-Equity and Price/Gross-Rents. There was relatively little difference among investor groups in regards to NOI/Initial-Equity (about 65% to 75%). Similar figures were reported on the use of Price/Gross-Rents except for insurance/pension companies who used this criterion much less (only about 30%). The second most frequent group of investment criteria included BTCF/Initial-Equity (equity dividend rate or cash-on-cash) and the IRR on equity (50% to 60%). The use of the IRR by property-holding companies increased during the 1980s from 25% in 1982 to 50% in this study.²⁵

Relatively large differences were reported on the use of BTCF/Initial-Equity with the highest use by property-holding companies (63%), and the lowest by insurance/pension companies (25%), which is consistent with the earlier remarks regarding the use of leverage effects and the concomitant need for direct cash flows. The third group of criteria consisted of present values and IRR on total capital (40% to 45%). Relatively large differences were reported on the use of Present Value of Total Capital with the highest use reported by insurance/pension companies (67%), and the lowest use by property-holding companies (37%), which is the reverse of the earlier observations. This confirms the view that insurance/pension companies emphasize the long-term capital value of their investments. The least favored criteria was reported on Equity Payback (25% to 40%), with the highest use by construction/development companies and the lowest by publicly traded real estate corporations. This may reflect the traditional reliance on one-year measures in the construction industry.

The total figures for all respondents together indicate a 69% usage of before-tax criteria and the following ranking:

1. NOI/Price (76%),
2. NOI/Initial-Equity (70%),
3. Price/Gross-Rents (68%),
4. BTCF/Initial-Equity (57%),
5. IRR on Equity (54%),
6. IRR on Total Capital (44%),
7. PV of Total Capital (41%),
8. PV of Equity (40%),
9. Equity Payback (34%).

Relative to the United States experiences, these results suggest a heavy use of many of the same calculations as reported throughout the American surveys. The rankings of

Exhibit 12
After-Tax Investment Criteria*

Investment Criteria	Publicly Traded	Insurance/ Pension	Property Holding Co.	Construction/ Development	Foundation/ Organization
% Using After-Tax Investment Criteria	21	14 (2 resp)	52	32	33 (2 resp)
ATCF/Init-Equity (ATCF + Apprec)/ Initial Equity	25	50	61	38	0
Equity Payback	25	50	45	38	0
NPV of Equity	50	100	23	3	0
NPV of Total Capital	50	50	33	44	50
IRR on Equity	25	50	28	31	0
Tax Write-offs and Depreciation	50	50	46	50	50
Other Criteria	75	0	47	88	50
	3		4	0	0

*Figures refer to proportions of respondents using after-tax criteria.

measures are similar as well, although the use of the payback period may be more popular in the United States than in Sweden. The magnitude of reported use for the DCF methods is similar in both countries.

After-Tax Criteria

As has been the tradition in the American studies, similar questions were asked about the use of after-tax investment criteria (see Exhibit 12). The results show a somewhat lower use of after-tax criteria (47%) relative to the use of before-tax criteria (69%) when taking all respondents together. The highest use of after-tax usage was reported by property-holding companies (52%) and the lowest by insurance/pension companies (but only two respondents) (14%). The results on the use of various after-tax criteria are therefore relevant mostly for the property-holding companies.

The low usage by insurance/pension and foundation/organization is easily explained by the tax-exemption status that these companies generally enjoy. The publicly traded and construction/development companies are little sensitive to taxes because of their wide-ranging possibilities for adjustment of results in order to minimize tax effects. The tax system in Sweden is so complicated that many parties refrain from explicit after-tax calculations.²⁶

The use of after-tax criteria cannot be captured into a clear pattern since wide differences were observed. Tax write-offs and depreciation were most popular with construction/development companies (almost 90%), while 75% of the publicly traded real estate corporations, and 47% of the property-holding companies reported usage. This is consistent with the view that construction/development companies deal with new undepreciated properties.

Regarding the property-holding companies one observes their most frequent use of the Tax Write-off and Depreciation criterion (67%) as well as the ATCF/Initial-Equity criterion (61%). The next group of frequent criteria includes equity yield (ATCF + Appreciation)/(Initial Equity) (45%) and IRR on Equity (46%).

The total figures for all respondents together (although dominated numerically by the property-holding companies), indicate the following ranking:

1. Tax Write-offs and Depreciation (71%),
2. ATCF/Initial Equity (58%),
3. IRR on Equity (49%),
4. (ATCF + Appreciation)/Initial Equity (47%),
5. NPV of Total Capital (29%),
6. Equity Payback (28%).

Clearly, the results are similar to those reported in American surveys in that use of after-tax criteria narrows there as well, although recent surveys report an increase in usage.²⁷ The percentage use of IRR and NPV are virtually identical between investors in the United States and Sweden as well.

Ranking of Motives for Investing in Smaller Cities

There has been an increasing discussion about big institutional investors moving into smaller Swedish cities. A question was asked about the frequency of investments in smaller cities among respondents and the motives for this behavior. Exhibit 13 presents the findings and shows that publicly traded real estate corporations as well

Exhibit 13
Ranking of Motives for Investing in Smaller Cities*

Investment Motives	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
% Investing in Smaller Cities	74	71	51	64	33 (2 resp)
Lack of Metropolitan Investment Opportunities	1	2/3	2	2	
Higher Risk-Adjustment Req. Returns	2	1	1	3	
Higher Potential Value Appreciation		2/3			1
Diversify Property Portfolios	2	2/3			
Other	3		3	1	2
Rank 1/Rank 2**	1.8	1.6	1.4	1.0	2.0

*Figures refer to proportions of respondents investing in smaller cities.

**The ratio "Rank 1/Rank 2" indicates degree of dominance by Rank 1 over Rank 2 choices. The higher the figure, the more powerful the first choice and the weaker the second choice.

as insurance/pension companies invest frequently in smaller cities (70% to 75%), although property-holding companies appear less interested (50%). The highest figures for publicly traded corporations and insurance/pension companies reflect their large size and their metropolitan background.

There is no clear pattern as to the most frequent motive for investing in smaller cities. A lack of metropolitan investment opportunities appears to be the main reason for publicly traded real estate corporations that probably cannot compete with insurance/pension companies for many metropolitan properties. Higher risk-adjusted regular returns seem to be the main motive for insurance/pension companies and property-holding companies. This may be viewed as an attempt by these companies to supplement the extremely low equity dividend rates they obtain in metropolitan areas. Other motives are decisive for construction/development companies who are often locally based and small and therefore have no choice but to stick to their own locality.

There is greater consensus as to the second choice. All groups reported a lack of metropolitan investment opportunities. The exception is the publicly traded real estate corporations that consider this to be the primary motive. Insurance/pension companies also reported higher potential value appreciation and portfolio diversification as second choice motives. The largest difference between the primary and secondary motives was reported by publicly traded real estate corporations that listed the lack of metropolitan investment opportunities as the first choice and the higher risk-adjusted regular returns as the second. An almost equally strong choice was reported by insurance/pension companies that considered the higher risk-adjusted regular return as the primary motive.

In total, the first choice was given to higher risk-adjusted regular return, followed by lack of metropolitan investment opportunities, and by other motives. The total figures for all respondents together, numerically dominated by property-holding companies, indicate the following ranking:

1. Higher risk-adjusted regular return,
2. Lack of metropolitan investment opportunities,
3. Other motives.

Investment in the smaller cities in the United States has taken on new interest in recent years in the institutional investment community. The attempt to identify geographic diversification opportunities is often alleged to be the primary reason. It is also possible that investment opportunities may appear more attractive in smaller cities as competition becomes more intense in the major commercial markets throughout the country.

Information for Investing in Smaller Cities

The respondents were also asked about their use of information about the markets in which they had recently invested. The results are presented in Exhibit 14 and show that those who most recently invested in smaller cities were publicly traded real estate corporations, insurance/pension companies, and construction/development companies (60% to 70%). The most common information source for such investment decisions was their own market knowledge and local contacts (80% to 90%).²⁸

Exhibit 14
Information for Recent Investments in Smaller Cities*

Investment Information	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
% Recent Investment in Small Cities	68	64	51	64	33 (2 resp)
Appraisal Report with Cash Flows	23	33	18	6	0
Consultant Report on Local Market	8	22	6	6	100
Own Market Knowledge and Local Contacts	92	78	85	88	50
Basic Ratios about Investment Property	23	11	7	6	0
Local Development Study including:	38	33	40	31	0
population and income	0	22	10	20	0
employment trends	15	11	16	30	0
property prices	31	44	36	90	0
econ. structure	23	33	34	70	0
other*	8	0	7	30	0
Intuition and Feel of the Market	15	0	21	19	0

*Figures refer to proportions of respondents who recently invested in smaller cities.

The second most popular information source was the local development study (30% to 40%). Within this category, the most frequently used analysis was that of the property prices (30% to 45%), with extremely high reliance reported by construction/development companies (90%). The second popular type of local development study was that of the economic structure (25% to 35%), again with much higher reliance reported by construction/development companies (70%). The third popular type of local development study was studies of employment trends (10% to 15%), also with much higher usage by construction/development companies (30%). The above high rate of usage by construction/development companies is consistent with the construction/development decisionmaking process requiring good market-derived local information.

The third most popular information source were reported for appraisal reports and intuition (15%), but with wide differences among investor groups. Appraisal reports, including cash flow projections, were most popular with insurance/pension companies (almost 35%). Intuition was the most popular with property-holding and construction/development companies (20%), and reportedly totally unused by insurance/pension companies and foundations/organizations.

The totals for all respondents together (although dominated numerically by property-holding companies), indicate the following ranking:

1. Own market knowledge (83%),
2. Local study (40%),

Internal market valuations were less frequent, with the highest use reported by insurance companies (70%) and the lowest by foundations/organizations (15%). The group of techniques used even less frequently included the return property ratios, the inspection of technical status, and the portfolio review. All these ranged between 15% and 40%.

It is interesting to note that the use of internal valuations by insurance/pension companies is more dictated by the needs of management control than by outside requirements.²⁹ Budget feedback on the property level as well as portfolio reviews are also more frequently used by publicly traded real estate corporations. All of this reflects different attitudes towards real estate as an investment. Insurance/pension companies in Sweden passively hold their properties for long-term capital gains. Other investors also exhibit this passivity as witnessed by the low overall usage of portfolio review (35%). On the other hand, the publicly traded real estate corporations actively seek higher returns to be reported to their shareholders. As to construction/development companies, their lower usage rates reflect their low interest in monitoring economic performance during the holding period. The total figures for all respondents taken together are as follows:

1. Budget feedback on the property level (65%),
2. Internal market valuations (50%),
3. External market valuation (commissioned) (45%),
4. Portfolio review (35%),
5. Return ratios on property (34%),
6. Inspection of technical status (32%),
7. Other feedback (4%).

It is unclear how these results compare with institutional investment practices in the United States. Most of the capital budgeting surveys do not seem to have concerned themselves with this issue. Indeed, this question is more consistent with the criticism that most surveys concentrate only on selection and not on investment management.

Property Management and Financial Control Systems

Finally, the respondents were asked to describe their property management and financial control systems. The results, presented in Exhibit 16, indicate that the most popular system is the complete internal property management system including technical, financial and economic dimensions. The highest use was reported by construction/development companies (90%) and the lowest by foundations/organizations (65%). The second most popular system was that of feedback control on property level. The highest use was reported by publicly traded real estate corporations (80%) with the lowest by construction/development companies (60%). The use of partially contracted out property management was the highest with foundations/organizations as well as for insurance/pension companies (almost 30%). The use of property managers responsible for particular properties was the highest for publicly traded real estate corporations (45%).

Wide variations was also reported regarding the use of formal plans for individual properties and their time horizons. The highest use was reported by insurance/pension

Exhibit 16
Property Management and Financial Control Systems*

Organisation and Control	Publicly Traded	Insurance/Pension	Property Holding Co.	Construction/Development	Foundation/Organization
Complete Internal Property Management**	79	79	73	88	67
Externally Hired Property Management	5	14	9	4	0
Management Partially Contracted Out	21	29	19	6	33
Performance/Feedback Control on Property	79	71	65	60	67
Responsible Manager on Property Level	47	36	20	20	0
Formal Plans for Each Property with Time Horizon of:					
1 year	32	50	33	16	67
2-5 years	42	29	27	20	50
6+ years	26	29	27	16	67
	0	7	2	2	0

*Figures refer to proportions of respondents.

**includes technical, financial and economic aspects

companies (50%) and the lowest by construction/development companies (15%). Most of the respondents used the time horizon of one to five years.

The total figures for all respondents together (although numerically dominated by property-holding companies), are as follows:

1. Internal property management (77%),
2. Performance/feedback control on property level (65%),
3. Formal management plan at the property level (32%),
4. Responsible manager for each property (21%),
5. Property management subcontracted in part (19%),
6. External property management (8%).

The above figures indicate a potential for improved professionalism. A good example of this is the low incidence of property responsible managers (21%) as well as of formal management plans at the property level (32%).

Nevertheless, the practice of property management in Sweden appears to be far ahead of that in the United States. Perhaps this is due to the lower rates of turnover in Sweden, but in general, property management in Sweden is thought to be a more fundamental part of real estate decisionmaking than in the United States.

Comparison between Sweden and the United States

Exhibit 17 illustrates the similarities and differences between the real estate surveys in the American literature and this study. It compares four well-known surveys of

Exhibit 17
Summary of American and Swedish Capital Budgeting Practices*
(insurance companies only)

Study (Date)	Wiley (1976)	Farragher (1982)	Page (1983)	Webb (1984)	Sweden (1993)
Number of Respondents (Insurance Company)	68	66	45	96	20
Before-Tax Measures					
(% Using BT)	93	NA	97	92	86
Payback Period	11	15	17	18	33
Gross Income Multiplier	13	6	5	18	33
NOI/Equity	40	NA	17	60	67
Overall Rate	NA	15	66	NA	50
Cash-on-Cash Return	54	73	39	59	25
IRR on Equity	40	76	66	64	50
After-Tax measures					
(% Using AT)	60	NA	87	51	14
Payback Period	7	NA	13	13	100
Cash-on-Cash Return	24	49	29	10	50
IRR on Equity	29	NA	61	56	50
Net Present Value	7	24	18	31	50
Risk Analysis					
(% Evaluating Risk)	87	NA	70	76	86
Raise Discount Rate	29	29	28	54	67
Sensitivity Analysis	12	23	20	13	58
Simulation/Prob. Mod.	16	10	5	7	50
Holding Period					
(Most Frequent in Years)	Various	NA	10	6-10	6-10
Diversification Strategy					
(None)	NA	NA	NA	34	43
By Property Type	NA	NA	NA	59	63
By Geog. Location	NA	NA	NA	61	63

*Figures refer to proportions of respondents using measures.

real estate practice for insurance companies in the United States with the Swedish experience. Similar comparisons could be made between other survey respondents.

A few observations are possible. First, the smaller number of insurance companies in Sweden may limit the generalization of the results. However, the insurance industry in Sweden is more concentrated than in the United States. Second, it is difficult to tell whether differences in the results stem from cultural differences, developments in professional practice over time, or both. Third, even for a small country, Swedish real estate investment practice, based upon these comparative findings, is roughly comparable with practice in the United States. In some cases, Swedish decisionmakers

appear to be more technical, more computer orientated, and as aware of state-of-the-art methods of analysis as their American counterparts.

Conclusions

The real estate investment community in Sweden appears to be divided into two broad groupings. One group consists of smaller-size construction/development companies and property-holding companies that dominate the investment scene at least in terms of numbers of firms. The other group consists of large-scale insurance/pension companies and publicly traded real estate corporations. These two groups often behave differently in their real estate investment analysis methods and practices which reflects size or scale differences as well as the different investment and institutional environments in which they operate.

The large investors, who have to continuously place high volumes of equity capital, have come to dominate prime-property submarkets by successively lowering their dividend rate requirements. Recently, they have been allowed to even invest abroad. The smaller-sized investors have been looking for less centrally located properties with higher risk-adjusted regular returns that can produce leverage effects. The present situation appears well suited for the acquisition of smaller-sized companies by these placement-hungry, large-scale, institutional investors.

Tax considerations are surprisingly less important in the Swedish investment community as a whole. Generally, this reflects the relatively low level of property and corporate taxation in Sweden as compared to personal income taxes that are the highest in the world. It also reflects the tax-exemption status of some investors as well as the ability of many investors, mostly construction/development companies, to set up performance accounting statements that minimize tax effects. Consequently, the use of before-tax analysis is reported to be greater than after-tax. This situation is likely to change with recent tax reforms striving to reverse the relationship between corporate and individual taxation levels. As such, tax considerations might be expected to gain in importance. Explicit risk diversification by the mixing of mortgage and equity positions is insignificant and contrasts sharply with the American pattern. Geographical diversification, especially with existing properties, relies heavily on "own-market-knowledge" techniques. There is still little use of property-level manager responsibility and management plans for most of management organisation and financial control of real estate portfolios.

The survey has revealed several areas for more research and development. These include mortgage-equity diversification as well as geographical diversification through more systematic market and feasibility analyses. More efficient management and financial control of real estate portfolios calls for more active management and evaluation of individual properties as well as operational and analytical integration of the property and portfolio levels. Progress in these areas will require a more diversified and complex systems for economically efficient systems for information selection, acquisition, processing, analysis, and interpretation. The emerging information and service society offers new promising tools for this development in terms of expert systems and artificial intelligence.

Notes

¹For example, Webb (1984) has argued that additional studies be performed on how real estate investments are managed and periodically evaluated.

² Office building rents for the Stockholm market rose by 54% during the period 1982–85, roughly twice the rate of inflation during the period.

³ Although comparative data by countries was not collected, Swedish financial institutions often held as little as 1% of their portfolios in real estate.

⁴Prices have been increasing at the rate of 100% every three years and had reached the level of \$770 per square foot by 1987 at central Stockholm locations.

⁵One of the insurance companies, Skandia, annually invests about \$150–\$500 million and has a current real estate portfolio of about \$2.8 billion. This is quite sizable for an entire country with a population of only slightly more than eight million people. Insurance companies as a whole own about \$8.3 billion worth of real estate. This represents about 65% of the commercial space in the CBD of Stockholm.

⁶For example, Swedish investors have been buying in Finland and some European cities such as London, Paris, Brussels, Amsterdam, Rotterdam, and Madrid. To date, investment in the United States has been marginal. Some foreign acquisitions were also made by buying corporate real estate of Swedish companies who are active abroad.

⁷For example, Hartzell, Hekman and Miles (1986) consider the present American industry practice using geographical and property-type diversification as naive and costly. They argue for combining property types, urban growth rates, and lease maturities as firms attempt to construct more efficient portfolios.

⁸This has occurred mostly in terms of credit rationing with a heavy emphasis on channelling funds to priority sectors including government expenditures and investments in housing. For more discussion, see *Financial Markets* (1987), Jonung (1986), and Myhrman and Sundberg (1986).

⁹The buyback option is legally unenforceable as it constitutes an encumbrance on title and as such is not recognised by the Swedish Land Act.

¹⁰However, recently, Pike (1988) suggested that history tells us that the “underlying focus is still essentially on the search for better decision criteria” despite the criticism of capital budgeting methods and practice.

¹¹For example, Hodder and Riggs (1985) discuss three main pitfalls in capital budgeting practice: improper treatment of inflation, excessive risk adjustments when risk declines in later periods, and a failure to acknowledge how management can reduce risk through diversification.

¹²Rosenblatt and Jacker (1979) examined fifteen of the surveys from 1955–77 and provided the first synthesis of these efforts. They reported that the incidence of firms using discounting methods rose with each survey from about 9% in 1955 into the 60% to 70% range by the 1970s. Aggarwal (1980) reviewed twenty-five surveys from the 1960s and 1970s and criticized the trend in the literature by observing that the responses to the questionnaires were not necessarily likely to reflect reality. Both Klammer and Walker (1984) and Scott and Petty (1984) provided overviews of the surveys for the past decades. Both syntheses reached similar conclusions and perhaps the most glaring conclusion is the rise of discounted cash flow methods as the standard technique throughout the period with the measure of choice being the internal rate of return. Perhaps the most comprehensive survey of the surveys can be found in Mukherjee and Henderson (1987). In this article, they acknowledged that the long line of surveys reached a consensus on some issues: (1) discounted cash flow analysis is now the rule rather than the exception, (2) despite years of attack, the use of the payback method continues to hold a firm place in practice, and (3) risk analysis models are not universally accepted.

¹³The English language version of the survey is available upon request from the authors.

¹⁴However, for a subgroup of firms, a more reliable estimate is available. Of the publicly traded real estate corporations quoted on the Stockholm stock exchange, nineteen of the twenty-eight corporations responded, or about 70%.

¹⁵The property development function in Sweden has traditionally been integrated within construction companies.

¹⁶These were especially popular with insurance companies and pension funds with 80% to 100% of them reporting ownership of these types of property.

¹⁷While this is not the place for an elaborate discussion of the differences, the main point is to encourage further exploration of the different regulatory, economic, and cultural institutions between the countries.

¹⁸Capital gains taxation in Sweden for common stocks is more generous than ordinary income taxation after some period of ownership. This, of course, was similar to the situation in the United States prior to the changes resulting in the Tax Reform Act of 1986.

¹⁹Most of the acquisitions refer to sale-leaseback transactions in the market for industrial properties.

²⁰One reviewer suggested that rent-controlled apartments could be attractive due to accounting rules that might require assets to be valued at net book value rather than as a declining, economic asset.

²¹Nevertheless, diversifiable risk is likely to exist.

²²Other diversification techniques were less frequently used. Portfolio proportion guidelines were used most often by insurance/pension companies (50%). This may ascribe to these companies' explicit investment guidelines that stipulate real estate share in the total asset portfolio.

²³For example, see Webb (1984).

²⁴Property-holding and construction/development companies were equally interested in both changing the required rate of return and the expected benefit stream. Foundations/organizations and publicly traded real estate corporations were more interested in adjusting the required rate of return than the benefit stream. A comparison with the U.S. results indicates that relative to their counterparts in the United States, Swedish analysts rely on risk adjustments to a greater extent.

²⁵See Larsson and Sundberg (1982).

²⁶It should be noted that recent tax reforms have been implemented which could greatly simplify the tax code as well as among other things, lower marginal tax rates consistent with this development in many other nations of the world.

²⁷See Webb and McIntosh (1986).

²⁸However, the authors believe that there might be some bias stemming from the wording of the question which failed to isolate those investors who invested in their "own" cities.

²⁹See Hansson and Leijon (1987).

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