ASSESSMENT AND ENHANCEMENT OF DECISION-MAKING MODELS USED FOR THE PRE-DEVELOPMENT STAGES OF OFFICE DEVELOPMENTS IN TURKEY

A Dissertation

by

ISILAY CIVAN

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2007

Major Subject: Architecture

ASSESSMENT AND ENHANCEMENT OF DECISION-MAKING MODELS USED FOR THE PRE-DEVELOPMENT STAGES OF OFFICE DEVELOPMENTS IN TURKEY

A Dissertation

by

ISILAY CIVAN

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Approved by:

Co-Chairs of Committee,	Robert E. Johnson
	M. Atef Sharkawy
Committee Members,	Iftekharuddin M. Choudhury
	Jennifer A. Sandlin
	Harold D. Hunt
Head of Department,	Mark J. Clayton

May 2007

Major Subject: Architecture

ABSTRACT

Assessment and Enhancement of Decision-Making Models Used for the Pre-Development Stages of Office Developments in Turkey. (May 2007)

Isilay Civan, B.Arch., Istanbul Technical University;

M.S., Istanbul Technical University;

Ph.D., Istanbul Technical University

Co-Chairs of Advisory Committee: Dr. Robert E. Johnson
Dr. M. Atef Sharkawy

Real estate development involves many complex, dynamic, and uncertain elements. In the pre-development stage, greater uncertainties result from the fact that the space being considered has not yet been created. Considering both the inherent characteristics of the real estate and the inefficiency of the market it operates in, any aid in the investment decision process is believed to add to the quality of the end product. This being the case, most, if not all, of the development companies make office development decisions using some kind of a procedure in the pre-development stage. However low occupancy rates and long payback periods that are being faced, even by the most recently completed Class A office projects in Turkey, show that there are serious deficiencies in these applied procedures and that they lack the necessary and important components of project feasibility analysis, which are basically the market and financial feasibility analysis, that needs to be applied in the pre-development stage of the office development process. That is why this study's purpose is to explore and identify

the deficiencies of the decision-making models currently used by Turkish real estate development companies in the pre-development stage of office development projects and to recommend necessary additions and/or deletions for the enhancement of these company models.

To do so, this research involved interviews of ten office developers to identify their go/no-go decision processes in evaluating office developments in Istanbul, Turkey. The study has found that developers tend to fall under three different groups, each following different models: Group I includes exclusively construction companies, Group II includes mixed companies and Group III includes exclusively real estate investment companies. Furthermore, the research has found that similarities and differences among these three groups involve the following: While investment companies seek opportunities based on market research, decisions by construction companies are driven by the availability of land swaps. All three groups emphasize land availability and related title and land-use issues. Although unit-sale continues, there is a gradual shift to income property with the aid of improvement in the financial market, which is also reflected in the decision-making models being used.

DEDICATION

As Dorothy L. Nolte states:

> "Children learn what they live".
>
> …
> *If children live with tolerance,*
> *They learn to be patient.*
> *If children live with encouragement,*
> *They learn to be confident.*
> *If children live with praise,*
> *They learn to appreciate.*
> *If children live with approval,*
> *They learn to like themselves.*
> *If children live with acceptance,*
> *They learn to find love in the world.*
> *If children live with recognition,*
> *They learn to have a goal.*
> *If children live with sharing,*
> *They learn to be generous.*
> *If children live with honesty and fairness,*
> *They learn what truth and justice are.*
> *If children live with security,*
> *They learn to have faith in themselves and in those around them.*
> *If children live with friendliness,*
> *They learn that the world is a nice place in which to live.*
> *If children live with serenity,*
> *They learn to have peace of mind.*

Thus,

I would like to dedicate this dissertation

to my dear family (Nazmi, Gulten, and Umutay Civan)

with my greatest gratitude and appreciation

for all the things that they have taught me

and helped me with throughout my life.

ACKNOWLEDGEMENTS

This research would not be possible without certain people that I have the privilege of knowing.

First of all, without my dear family's support, my father Nazmi Civan, my mother Gulten Civan and my sister Umutay Civan, I would not have been able to come this far in my education. Their dedication, never-ending love and support were vital during this wearisome process.

Special thanks go to my co-advisors Prof. Dr. Bob Johnson and Prof. Dr. Atef Sharkawy for always supporting me, encouraging me and ultimately finding the best in me. Both Prof. Dr. Atef Sharkawy and Prof. Dr. Bob Johnson provided endless guidance and full support not only for my dissertation but also for all my academic and professional endeavors.

I also would like to thank my committee members, Assoc. Prof. Dr. Ifte Choudhury, Assist. Prof. Dr. Jenny Sandlin, and Dr. Harold Hunt, for being incredibly patient and understanding throughout this long and tedious process. Additional thanks go to Dr. Harold Hunt for supporting me in all my academic and professional endeavors, and helping me edit my dissertation.

Moreover, I would like to extend my thanks to the senior level managers that I have interviewed with for their time and assistance. This research would not have materialized without their invaluable assistance and insight.

Lastly, I would like to thank my friend Dr. Taner R. Ozdil for being a continuous support during some of the tough times, when I felt rather overwhelmed.

TABLE OF CONTENTS

Page

CHAPTER Page

Page

LIST OF FIGURES

FIGURE Page

LIST OF TABLES

TABLE Page

TABLE Page

CHAPTER I

INTRODUCTION

General Problem

The real estate development process involves a complex set of decisions that relate to both physical and financial issues such as the project's location, design, financing, construction, marketability, feasibility, and operation and management (Peiser, 1992; Sharkawy, 1994). Certain decisions can be made simultaneously, whereas others should be made sequentially. Sequential decisions, especially the ones that need to be made quite early in the process, are the most crucial for the success of the project. These are the critical node points faced during the pre-development stage, where a go/no-go decision is required for the continuation of the development process.

However, since the space under consideration has not been built yet, reliable and accurate information in this early stage is hard to find, which also makes these decisions rather risky (Wurtzebach & Miles, 1994). Usually, there is not much time to reassess each decision that is made during this process. In addition, the decisions made in the pre-development stage are typically based on limited developer resources, including time, capital and manpower (Graaskamp, 1991a). Furthermore, because of a narrow "window of opportunity," time is of the essence, and the stakes are generally high (Etter, 1995). If the right decisions are not made quickly enough, the project might be too late to enter the market and the opportunity may be lost.

This dissertation follows the style and format of *The Journal of Real Estate Practice and Education.*

Once the go/no-go decisions are made at the critical node points, there is no going back without sustaining considerable losses. Therefore, the argument can be made that any strategic framework which is simultaneously synthesizing, integrating, and comprehensive, will reduce risk and provide individual investors and developers a competitive advantage over less informed investors and developers in the same market. Use of such decision-making models while making these imperative decisions should significantly improve the final "go" or "no-go" decision. Up until now, different developers have adapted different models. However, since each project is unique in nature, any chosen model should be modified for the unique environment it will be used in.

Statement of the Research Problem

According to the Urban Land Institute (Gause, 1998), among the various segments of the real estate development industry, office development is possibly the most complex and competitive. It is also one of the most potentially rewarding. This may be due to the vital significance of business activity that takes place in office buildings and their influence on the country's economy. For any real estate investment to be successful, a careful analysis of the many contingencies on which the decision depends is required, and office development is no exception.

As stated by Jaffe and Sirmans (Freeman, 1987), the real estate investment process involves five basics steps, two being the heart of the ***project feasibility analysis*** that leads the decision maker to a final go/no-go decision. These two vital steps are: analyzing the investment environment and market conditions - ***market analysis***, and

developing the financial analysis and forecast cash flows from the project as well as the costs involved with the investment - ***financial feasibility analysis***, respectively.

Considering both the inherent characteristics of real estate (physical immobility, long economic life, large economic size) and the inefficiency of the real estate market (Etter, 1995; Ford, 1994; Graaskamp, 1991a), one can conclude that any aid in the investment decision process should add to the quality of the end product and provide individual investors and developers with a competitive advantage over others competing in the same market. Additionally, keeping all of the above facts in mind, it would be wise for an investor and/or developer to give the utmost attention to the pre-development stage. Although the basic formation of the development takes place in this stage, it is also the stage where reliable information is the scarcest. However, the effect of the decision is the most critical to the success of the end product.

As a result, the pre-development stage is the riskiest stage in terms of investment decisions, requiring a strategic framework which is simultaneously synthesizing, integrating, comprehensive, and at the same time being modified for the unique environment it will be used in. Strategic decision-making models used in real estate developments, like the Real Property Development Model by Wurtzebach & Miles, the Two Computer Simulation Model by Canestaro and the Revised Multidisciplinary Development Planning Model by Graaskamp & Sharkawy, provide such a platform. They combine the unique characteristics of real estate developments with basic principles of valuation and investment to enhance the quality of real estate decision-making (Sharkawy, 1975; Sharkawy 1994).

However, in most European countries, including Turkey, real estate is not recognized as a distinct discipline or topic for study. Because of that, the discipline of real estate lacks understanding about the essence of real estate and its operative paradigms for comprehension and order (Lizieri & Baum, 2002; Onder, 2002). With the belief that academic studies should feed the theoretical basis of industry, this nonexistent knowledge base in the Turkish real estate market is believed to significantly hamper industry professionals, thus preventing them from making educated investment decisions.

In line with the numerous real estate review reports (Colliers International, 2003; Colliers Resco, 2003; Cushman & Wakefield - Healey & Baker, 2003; Kuzey Bati Gayrimenkul Hizmetleri, 2003; NAIPega Commercial Real Estate Services, 2002) that discuss Turkish real estate, it could be beneficial to determine factually that there is a serious problem with the way office development investment decisions are made in Istanbul, Turkey. Abnormal vacancy rates and long payback periods faced by even newly-constructed Class A office buildings are just a few indicators of this problem. Although most, if not all, of the development companies are assumed to use some type of model while making their go/no-go office development decisions in the pre-development stage, the problem is believed to actually lie in the incompleteness and/or inaccuracy of these models. Therefore, in this study the Turkish development companies' decision-making models will be assessed to determine if any disparities are to be found. If any disparities are uncovered, it will also be determined whether these models can be improved or enhanced to bolster their performance.

Purpose of the Study

This study's purpose is to explore and identify the disparities of the decision-making models currently used by Turkish real estate development companies at the pre-development stage of office development projects and to recommend necessary additions and/or deletions to enhance these company models.

Research Questions

The research questions guiding this study are:

- How do Turkish real estate professionals make a go/no-go decision in the pre-development stage of office development projects?
- Which analyses are applied in the pre-development stage in order to assess the economic viability of the office development projects?
- Are the procedures currently being followed to make office development decisions in the pre-development stage different?
- If so, what are the disparities of these procedures undertaken in the pre-development stage of office development projects?
- What kind of additions, deletions, or improvements could be suggested to increase the effectiveness of these applied analyses / used procedures?

Significance of the Study and Anticipated Benefits

Project feasibility analysis is the basis for office development investment decisions that lead the investor / developer to a go or no-go decision. Although this initial analysis plays a vital role in the success of the development project, it generally lacks reliable and consistent information at the time this analysis is made, making the

investment quite risky. As mentioned earlier, further complicating the situation is the fact that such analysis is generally based on limited developer resources, including time, capital and manpower. In addition, because of a narrow "window of opportunity," time is of the essence, and the stakes are generally high (Etter, 1995).

This being the case, why do individuals continue to enter this complicated and risky investment environment, even on a global basis? More importantly, why do they do it with little or no information? The answer, in simple economic terms, is that high risk implies a high expectation of financial returns (Etter, 1995), and time is of the essence when there are limited opportunities. Therefore, any methodology which facilitates information flow and the associated decision-making process will reduce risk (Etter, 1995) and provide individual investors and developers a competitive advantage over less informed investors and developers operating within the same market.

Strategic decision-making models can provide such a mechanism and platform for these individual investors and developers. However, current studies show that the Turkish office development market lacks any such accurate and thorough decision-making framework. Absence of such a structure leaves the Turkish office market with high vacancy rates and long payback periods. This is even true for newly built Class A office buildings. To prevent further redundant office space pollution in Istanbul, Turkey, exploration of current project feasibility analysis in the pre-development stage of office development projects has been chosen as the primary focus of this research. Once the probable disparities of the applied models are identified, necessary additions and/or deletions will be recommended for the improvement of each model under consideration.

Evaluation and enhancement of the currently used models in Istanbul, Turkey is believed to improve the future office development decisions of the primary decision-makers, thus helping them make better-informed go / no-go decisions. It is also strongly believed that a more transparent, consistent and procedural way of doing business in the Turkish office development market may also help convince and encourage international investors and developers to invest in the Turkish real estate market. Use of international standards and practices should increase the confidence level of foreign investors and developers while decreasing the perceived risk of doing business in the Turkish real estate market.

Definition of Terms

Financial Feasibility occurs when the project can generate adequate net operating income (NOI) to support sufficient debt to finance the property and provide satisfactory cash return to the developer / investor. A project's feasibility is a function of its expected cost, its expected operating performance, the lender's requirements, mortgage market conditions and the developer / investor's required rate of return (Etter, 1988).

Financial Feasibility Analysis / Economic Study enables developers to determine if a proposed project will generate sufficient cash flow to pay the debt service on its construction and permanent loans and provide an adequate return on the equity capital invested in the project (Gause, 1998).

Go / No-Go Decision Analysis deals with decision to proceed with the particular project or not to proceed and look for another project. Go/no-go decision analysis may

take place in any of the development stages of the project, but is less costly if applied effectively in the pre-development stage.

Market Analysis / Research / Study is defined as research of secondary data sources to define trends, patterns of geographic fragmentation, and clusters of market segmentation [that] scale the size of any enterprise opportunity and provide a link between site and marketplace (Graaskamp, 1996).

Marketing Research involves any investigation that permits focusing of a real estate project on selected segments of consumers with a unique unfilled product and location requirement (market gap) and a point in time when supply alternatives are limited (market window). Because discount rates can reflect a lower load for market risk, the ultimate objective is to stabilize cash flows and maximize values (Graaskamp, 1996).

Market Segmentation is separating the market data into geographic, demographic and psychographics (studying life styles) categories. This disaggregation helps identify real estate products or services that satisfy unmet consumer demand (Canestaro, 1989).

Merchandizing Research is defined as primary research of specified subsets of customers and competitive supplies to confirm appropriate ratios for the disaggregation of aggregate data to identify location, space and amenity needs, and to specify levels of effective demand (Graaskamp, 1996).

Project Feasibility Analysis is composed of two separate and distinct analyses, which are market analysis and financial feasibility analysis, respectively. Developers and investors use project feasibility analysis to identify and evaluate opportunities for

constructing new office buildings and for repositioning existing buildings to attract different segments of the market (Gause, 1998).

Real Estate can be defined generally as space delineated by man, relative to a fixed geography, intended to contain an activity for a specific period of time (Graaskamp, 1991a).

Real Estate Development is the process of responding to a real estate need in the society by creating and financing a product that satisfies that need (Zuckerman & Blevins, 1991). It is basically about creating value for all stakeholders, including society.

Risk is the difference between expectations and realization. An essential element of real-estate decision-making is determining the risk probability inherent in each option being considered (Canestaro, 1989).

Delimitations

1. This study is limited by the number of office development companies that are actively operating in Istanbul, Turkey.
2. This study is limited to the pre-development stage of Class A and Class B type office development projects (see office development section for class definitions).
3. This study's results will be limited to companies being interviewed. There will be no attempt to make any generalizations and/or develop an overall model that could be applied to all office development projects. However, the results should highlight the most important and common disparities of the decision-making processes undertaken by each development company and their highly probable solutions.

Assumptions

1. Each and every real estate development company in Turkey follows some procedure while making decisions for office development projects during the pre-development stage.
2. Each and every interviewee will answer questions honestly and diligently.
3. The project feasibility analyses, used in the pre-development stage of office developments, are general guidelines and can be used as a procedural framework for a variety of office developments across different countries. However, this does not preclude some adaptation (additions/deletions) due to the unique characteristics of each country.

Organization of the Study

To be better equipped to understand the problem at hand, in Chapter II an extensive review of literature will be conducted, starting from a broad perspective. Initially, real estate development in general, the development processes and their unique characteristics will be identified. Next, three of the most comprehensive and well-respected decision-making models will be thoroughly examined, both individually and comparatively, to determine the basic requisites for a successful go/no-go decision-making model.

Then, emphasis will be directed specifically toward office developments, as this market segment is the primary focus of this study. Development and investment decision-making characteristics unique to the office developments will be discussed in detail as well. This will be followed by the introduction of the project feasibility analysis

concept, which is recognized as the heart of the decision-making process. Finally, the office market in Istanbul, Turkey, will be explored, and the problems of the local office market will be identified.

In the methodology section, Chapter III, the design of the study and its sample selection process will first be explained. This will be followed by the elucidation of the data collection process. Afterward, data analysis and interpretation of the data will be described. Subsequently, details concerning reporting the data to the interviewees and dealing with the reliability, validity and researcher bias issues will be mentioned.

In Chapter IV, the results and findings of the study will be summarized, starting with each company's descriptions and response summaries to the three-sectioned interview questions. This will be followed by an illustration of the decision-making models being used by the interviewed companies. Consequently, these models will be compared among themselves, and their strengths and weaknesses will be highlighted.

In conclusion, Chapter V, an overall assessment of these decision-making models, will be summarized followed by a discussion of how to enhance these models based on the previously studied models and reviewed literature. Recommendations and suggestions regarding the improvement of these models will be made, and further study areas will be proposed.

Lastly, references and appendices to the study will be presented respectively.

CHAPTER II

REVIEW OF LITERATURE

This chapter focuses on a review of the literature related to the inquiry chosen to better understand the need for further analysis of the problem statement at hand. This review of the literature starts with a generic explanation of real estate and the real estate development phenomena, which shows the uniqueness of the study area and its basic requisites for successful investment decisions. Following this section, the real estate development processes and key participants involved are emphasized, focusing on the most risky and thus the most important stage among all, – the pre-development stage.

Next, some of the most thorough and comprehensive real estate decision-making models are discussed. This section is followed by the development and investment decision-making characteristics unique to office developments. Next, the project feasibility analysis concept, which is regarded as the heart of the decision-making process, is introduced. This is followed by a brief overview of the Turkish real estate market. Finally, the office market in Istanbul, Turkey, is explored, and the problems of the local office market are identified.

Real Estate Development

As the late James Graaskamp (1991a) has argued, real estate can be defined generally as space delineated by man, relative to a fixed geography, intended to contain an activity for a specific period of time. In addition to the three dimensions of space (length, width, and height), real estate has a fourth dimension – time for possession and benefit. This can be referred to as a space-time characteristic. The space-time concept

can be illustrated by these terms: apartment rent per month, motel room rental per night, and square footage rent per year. A fundamental element in real estate is that any space-time unit has a corresponding monetary value.

The creation and management of space-units is termed real estate development. Similar to a manufactured product, a real estate project is part of a larger physical system programmed to achieve long-term objectives. But, each real estate project is also a small business enterprise of its own. Thus, the development process is a continuum of construction technology, financing, marketing skills, administrative controls, and rehabilitation required to operate the real estate enterprise over many years (Graaskamp, 1991a).

Real estate development is a complex, collective process, not only accommodating an activity within the parcel, but also adapting to the context of a specific surrounding environment involving different personalities and interest groups as well as limited sources. The political and social process required to produce a real estate product must consider a variety of impacts to find equitable reconciliation between who pays and who benefits (Graaskamp, 1991a).

The basic requisites for real estate development are ***"to be able to predetermine the needs of a community"*** and ***"to have a project available when it is wanted"*** (Saft, 1990). Real estate development usually runs in cycles of scarcity followed by periods of overbuilding, absorption, and then scarcity, leading to the cycle's repeating itself. A successful project is dependent upon the availability of the ***right project*** in the ***right place***, and at the ***right time*** (Saft, 1990). Identifying a product that the market lacks is

the key issue affecting the success of a project, and finding that niche is the developer's key challenge (Peiser, 1992). Finding a niche in the market requires creativity and deals with creating value for the project. To create value, developers should deal with differentials rather than similarities.

Real estate development is an art that requires drive and creativity coupled with flexibility and risk management. Taking a cookie-cutter design off the shelf and applying it to an available size is not the winning strategy in saturated markets or in markets where space needs are changing. Serious attention to the market, which means to the people who will use the project, is necessary to show developers as well as their architects and planners how to capture market share from competitors or how to create a new niche (Miles, Haney & Berens, 1994).

Real Estate Development Processes and the Key Participants

In general, the real estate development process requires several sub-development processes and stages to follow. First comes the pre-development process where project inception and schematic studies stages are implemented. Then comes the document development process, including preliminary studies and final documents stages. Third is the project production process, where construction / rehabilitation and marketing / leasing / sales stages are undertaken. Finally comes the post development process, including property management and asset management stages.

As with the processes, key participants will also vary and, on occasion, take on multiple roles. Typically a real estate development process will include a developer,

equity investor(s) and lenders (Sharkawy, 1994). The most important player of all is the developer, without whom the project cannot be possible.

The developer is first a source of ideas, one who translates perceived needs into a concept of space that will satisfy those needs. Next, the developer is the promoter, bringing together the capital, labor and materials needed, while at the same time seeing that the project meets the regulations imposed by one or more levels of government (Wurtzebach & Miles, 1994).

Once the process is underway, the role of the developer becomes that of a manager who must coordinate the efforts of all the participants in the development process and keep them moving toward a common goal. Finally, it is the developer who must ensure that someone supervises the operations of the completed project (Wurtzebach & Miles, 1994).

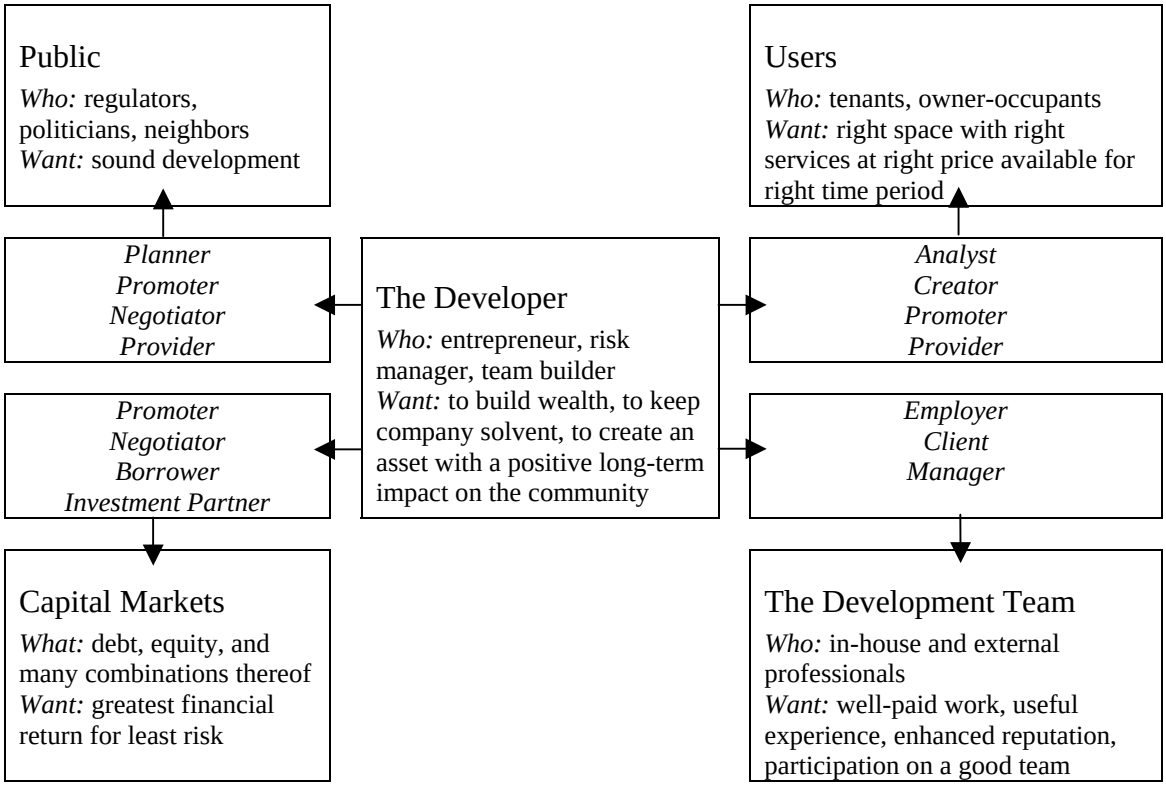
As the project's prime mover, the developer seeks the maximum possible return with a minimum commitment of time and money. As the primary risk bearer, the developer's exposure is a time function of his or her direct financial commitment as well as the magnitude of any guarantees and the likelihood of their being called on (Wurtzebach & Miles, 1994).

Developers rarely utilize their own money in financing the development of a property. The usual scenario involves bringing in a financial partner for the equity investment while arranging construction and permanent financing for the hard costs of the development. Equity partners and lenders are also equally important for the real

estate development process, since it is the financing of a project that makes the project become a reality.

Even though the developer is typically the driving force during the subsequent stages of development, as seen in figure 1 (Wurtzebach & Miles, 1994), landowners, space users, or sources of capital are the catalysts for development ideas.

Figure 1
The Developer's Roles & Relations



During the development process, ideas emerge in many different ways. Developers often discover *a site looking for a use*. For one reason or another, the owners of a particular parcel, whether public or private, want the site to be developed, thereby creating possibilities for the developer. Sometimes the site is already developed and the

existing structure needs to be redeveloped. Alternatively, developers might find *a use looking for a site*, which is frequently the case when corporations want to expand, introduce a new product, or restructure their operations, thereby creating a need for constructed space. Finally, powerful capital market forces might be at work such that *capital is looking for a development opportunity* (Greer, 1997; Graaskamp, 1991b; Jaffe & Sirmans, 1982; Greer 1979).

In terms of investment decisions, the ***pre-development stage*** is the most risky of all stages. Although basic formation of the development takes place in this stage, it is also the stage where information is the least reliable while the effect of the decision is the most critical to the end product. For this reason, this is the stage where investors / developers require a strategic framework which is simultaneously synthesizing, integrating, comprehensive, and at the same time modified for the unique environment that it will be used in. Strategic decision-making models like the Real Property Development Model by Wurtzebach & Miles, the Two Computer Simulation Model by Canestaro and the Revised Multidisciplinary Development Planning Model by Graaskamp & Sharkawy used in real estate developments provide a mechanism and platform to combine the unique characteristics of real estate developments and basic principles of valuation and investment, enhancing the quality of real estate decision-making (Sharkawy, 1975).

Real Estate Investment Decision-Making Models

Although the importance of the decision-making models cannot be overemphasized, when previous literature is reviewed one can see that real estate

investment analysis has consistently lagged behind mainstream finance and investment thought for years. It wasn't until the late 1960s and early 1970s, for example, that analytical tools and techniques pioneered by economists and corporate financial analysts in the 1950s began to appear in the real estate literature (Greer, 1997).

Writing for the Appraisal Journal in 1970, Richard Ratcliff and Bernhard Schwab decried the virtual absence from real estate appraisal and investment literature terms such as probability, utility function and time value of money. Such terms were routinely being used by investment decision theorists at the time (as cited in Greer, 1997).

More recently, modern decision theory has been grafted onto traditional real estate analysis, and the equity valuation technique has been widely adopted. Computerized modeling used to forecast after-tax cash flows and explore operating results or changes in the operating environment is now commonplace (Greer, 1997; Jaffe & Sirmans, 1982).

State-of-the-art investment analysis treats real estate as a capital asset demanded for the stream of monetary benefit it generates. In this context, real estate becomes a special case of modern capital budgeting. Its analysis utilizes discounted cash flow techniques and incorporates risk adjustments (Greer, 1997; Sharkawy, 1994; Graaskamp, 1991b; Jaffe & Sirmans, 1982).

Keeping all of the above facts in mind, including the inherent characteristics of real estate, inefficiency of the real estate market and the importance of a model that

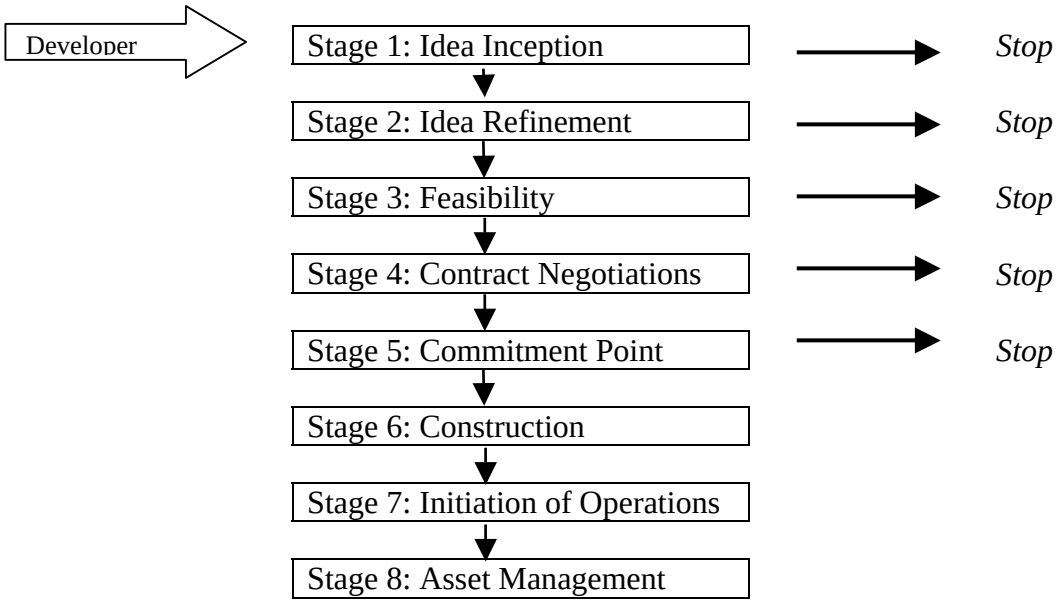
assists in the decision-making process, it would be wise for an investor / developer to give the utmost importance to the pre-development stage.

To reduce the risk undertaken in this stage, several decision-making models have been developed. For the purpose of this study, three of the most comprehensive and well respected models, Wurtzebach & Miles Model, Canestaro Model and Graaskamp & Sharkawy Model, will be identified as examples in the next section.

Example # 1: Wurtzebach and Miles Model (The Real Property Development Model)

In this model, the real property development process is comprised of eight stages (figure 2)[1]. However, just the first five stages of the model will be explained below in order to clarify the go / no-go decision-making process in real estate development.

Figure 2
The Real Property Development Model



[1] As cited in Wurtzebach & Miles, 1994 and Miles, Haney & Berens, 1996

Stage 1: Idea Inception

The development process begins with the idea inception. In this stage, the developer generates an idea for a particular type of project and considers what project size might be appropriate for a particular urban area. The developer then reflects on the type of tenants who might be interested in the projected space and considers possible financing resources. Stage one of the development process ends when the developer tests the new idea with a "back-of-the-envelope pro forma" – a simple comparison of value to cost. If value exceeds cost, at least based on the estimated numbers, the idea remains viable. If cost exceeds value, it is back to the drawing board.

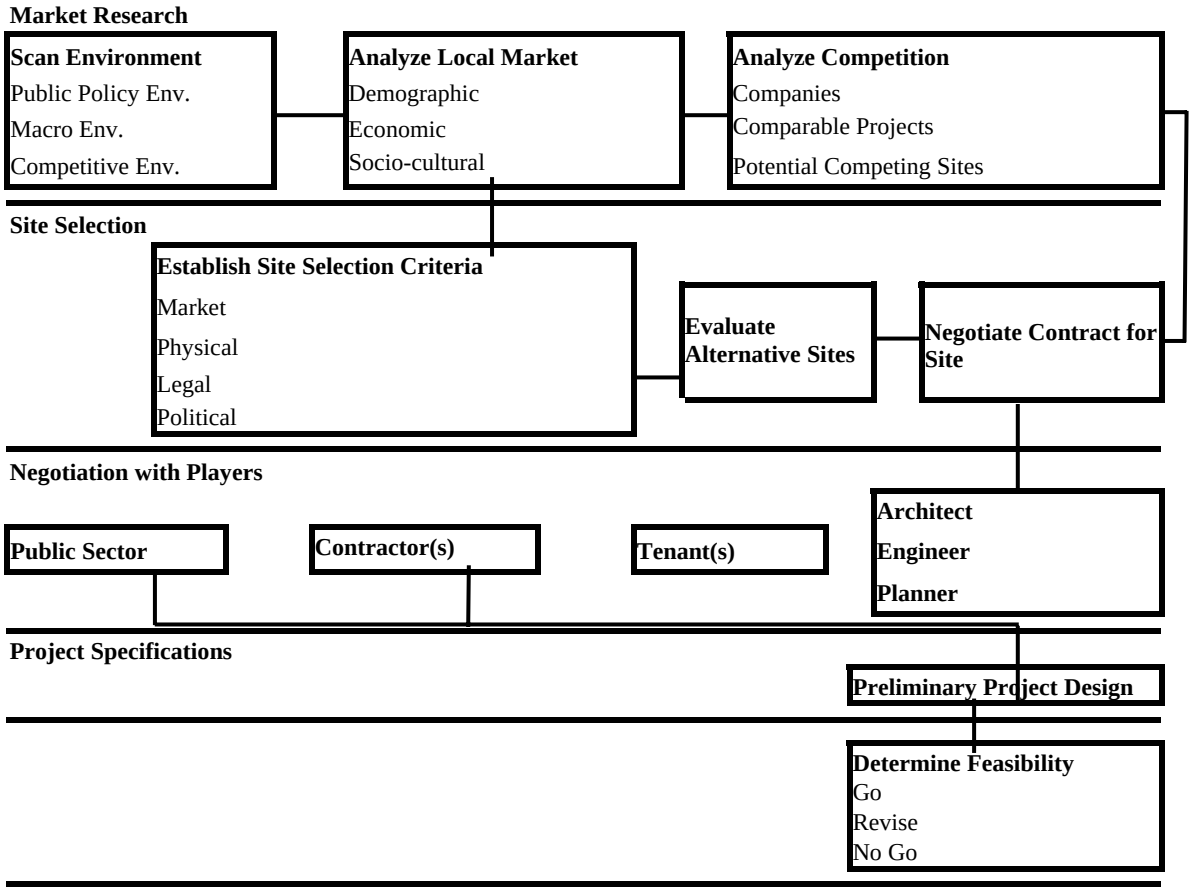
Like most research-driven activities, the vast majority of ideas do not pass muster. Thus, most of the time, stage one ends with the best possible device to control risk: the decision to stop. The prospect of a "no-go" decision is a natural part of the development process. But the compensation for nine ideas that die on the back of the envelope is one good idea worth refining in stage two.

Stage 2: Idea Refinement

The intent in the second stage is clear: the developer's idea must either evolve into a particular project design associated with a specific piece of land or be abandoned before extensive resources are committed to the idea. Since an idea remains conceptual until the developer finds a site and designs the project, finding and acquiring a site and making an initial determination of physical feasibility are two important objectives in stage two.

Associated with the physical objectives are marketing, financial, and management objectives, which combine with the physical objectives to allow the developer to feel reasonably confident about the feasibility of the project at the end of stage two and to permit a significant increase in "resource commitment" during stage three. During stage three, the developer must demonstrate the project's feasibility to all participants in the development process. In stage two, however, it is the developer who must become convinced of project feasibility since it is largely his/her funds that will be expended during stage three to convince the other participants of the project's viability.

Figure 3
Activities Involved in Refinement of the Idea



In the process of finding a site and specifying a proposed project, developers must undertake the following tasks simultaneously (also shown in figure 3):

1. Scanning the environment for significant forces – possible competitors, government jurisdictions, political power bases;
2. Analyzing the market, that is, the areas or neighborhoods within the market that might offer an appropriate site;
3. Setting market, physical, legal, and political criteria for the proposed project;
4. Analyzing possible sites to identify the site that best satisfies the criteria;
5. Negotiating for the selected site and structuring a contract (usually one that constitutes an option) to secure the site;
6. Conducting discussions with elected and appointed officials and city planners to ascertain their interests and any possible constraints on the project;
7. Analyzing the competition – competing development companies and competing projects – to learn more about the market and supply;
8. Testing the design's preliminary feasibility by discussing with engineers, architects, land planners, contractors, and/or financial sources a project design that fits the prospective tenant market; and
9. Periodically re-testing the back-of-the-envelope numbers for financial feasibility and undertaking preliminary projections of the timing of cash flows over the development period.

Completion of these tasks culminates in a decision either to move the idea to stage three (formal feasibility), rework the idea, or abandon the idea.

Stage 3: Feasibility

The primary task in feasibility analysis is to produce a sound market analysis – one that culminates in a projection of net operating income for the subject property over the relevant time frame. Based on these projections, the developer estimates value for the project by using a discounted cash flow analysis. A project is said to be feasible when the present value of income and operating expenses exceeds all the projected costs of development. The following critical analytical issues should be taken under consideration to develop a complete feasibility study.

1. The idea and market for the project, from the big picture down to a specific absorption schedule, in the particular market niche under current conditions
    a) World, nation, region, city, neighborhood, site
    b) Number of people, taste, and income; when to spend dollars
    c) Comparables plus trends for validation
    d) Identification of major features, functions, and benefits relative to the competition
    e) Evaluation of existing supply, focusing on sites
2. Compilation and analysis
    a) Tie the foregoing into a discounted cash flow model
    b) Perform sensitivity analysis
    c) Review risks in optimal configuration
    d) Confirm that the project is feasible for each participant.

Stages 4 & 5: Contract Negotiation & Formal Commitment

Throughout stage four, contracts are being developed to implement the decision to proceed with the project; during stage five, the contracts are executed. A detailed agreement should be negotiated with each member of the development team. The developer must ensure that all the different aspects of the project have been included in the individual contracts and that the various relationships among players are clearly defined. Because many of the contracts are contingent on each other, stage five represents the joint execution of the contracts negotiated in stage four.

Contracts are another method of controlling risk. They set forth the rules for the physical, financial, marketing, and operating activities that will occur during construction, formal opening, and operation. If all contracts are properly drawn up and consistent with one another, the collective risk of all development team members should be reduced. With proper structuring of the contracts, the developer will be able to share an appropriate amount of the risk with other participants.

During stage four, negotiations ensure that the idea is still feasible because all details are confirmed in a set of formal contracts that explicitly outlines all details and establish an environment free of ambiguities. Once the documents are executed in stage five, most of the players no longer retain the option to walk out on the deal. In reality, of course, it is still possible to quit, but the consequences can be severe and costly after contracts have been executed. The following are the issues involved in both stages:

1. Stage four

    a) Arranging financing (permanent loan, construction loan);

b) Environmental issues affecting real estate (hazardous wastes, wetlands);

c) Decisions about design and contractors (bidding vs. negotiations, bonding);

d) Decisions about major tenants; and

e) Decisions about equity

2. Stage five

a) Commitment, signing contracts, and initiating construction.

Example # 2: Canestaro Model Refine: Two Computer Simulation Model

The Canestaro model[2] primarily focuses on feasibility analysis, which provides decision assurance through the evaluation of market forces, understanding developer / investor motivations, and measuring the value, profit and risk implications of any real estate decision. Feasibility analysis asks the question "is this business venture worth doing?" The analyst then carefully studies the various ways the business objective of making a profit can be achieved, constrained by limited resources. An important part of this research is identifying the cause and effect relationships that could increase value and profit while reducing risk. In real estate, the goal of feasibility analysis is to measure accurately the impacts of alternative management strategies on property development, acquisition, operation and/or disposition problems.

The analysis works best when a project's performance can be compared with standards and benchmarks established by comparable projects, financial partners, or developer's/investor's specific productivity targets. One can also evaluate alternative project proposals by rank ordering them on the basis of value, profit and risk aversion

[2] As cited in Canestaro, 1989.

estimates. Finally, the feasibility analysis should examine objectively all facets of the problem, since any real estate venture involves many different participants, each with their own individual motivations for participating in the project. In other words, one must determine who pays for and who benefits from any real estate deal.

This approach to feasibility analysis is built on a foundation of verified data, that is, reliable, objective information. However, in any study there are always areas of factual uncertainty which must be resolved by the judgment, and technical experience of the analyst. The effectiveness of analyzing the problem, in part, will depend on the depth of reliable data and the logic used to define assumptions. It may be necessary to undertake some or all of the following seven categories of studies to fill in missing facts and justify assumptions:

1. Strategy study: selection of objectives, tactics, and decision criteria;
2. Market study: economic base studies or other related aggregated data review;
3. Merchandising studies: consumer surveys, competitive property analysis, marketability evaluation;
4. Legal studies: opinion on potential legal constraints, model contracts or forms of organization, and political briefs;
5. Compatibility studies: impact analysis of the project on community planning, environmental quality, fiscal solvency, or other public policies;
6. Physical design studies: engineering, land planning, and architectural studies;
7. Financial studies: economic modeling, capital budgets, present value and discounted cash flow forecasts and rate of return analysis.

The principle objective of market research is to identify a target real estate market with an unmet demand which one can satisfy profitably. The developer/investor must answer the question: “How will the market respond to this real estate project or investment opportunity through consumer decisions, political attitudes, and competitive reactions?” Market research, by its very nature, is a simplified model of the consumer decision process.

Merchandizing research uses data collected about comparable projects to determine the effective consumer demand for a specific site, with a particular set of space and amenity features. This type of study also determines the real estate product and service standards, which must be exceeded to achieve a competitive edge or remove obstacles to consumer acceptance.

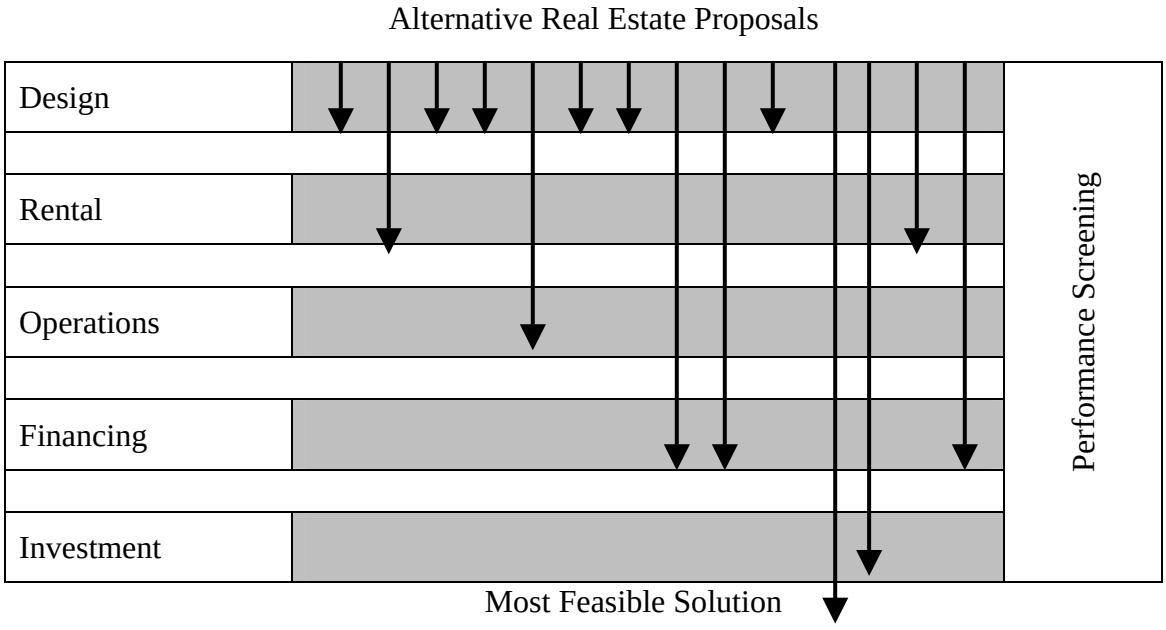
Typically, the analyst focuses the research by segmenting market data into geographic, demographic, and lifestyle categories. Obviously, this segmentation helps identify real estate products or services that satisfy unmet consumer demand. Segmentation can be based on geographic parameters such as physical boundaries, political jurisdictions, urban infrastructure and settlement patterns, as well as driving distances and times to define the real estate market.

Assuming the developer has already identified a potential site, the basic order for screening alternative real estate proposals to determine their relative feasibility is illustrated in figure 4 (Canestaro, 1989). Unrealistic options will be eliminated as the analysis proceeds. The alternative, which satisfies the best of all the design, rental, operations, financing and investment tests, will be considered the most feasible solution.

This model uses three basic rules for measuring project feasibility, all evaluated in the context of time:

1. The value of benefits generated by a project must exceed the capital investment.
2. The annual benefits must generate profits in excess of the investors' desired rate of return.
3. There must be a minimal difference between the anticipated project risk performance and the results of the feasibility analysis.

Figure 4
Alternative Real Estate Proposals and Determining the Most Feasible Solution



Value Analysis

The conventional investment logic seeks to create a project value, which exceeds the capital investment by the greatest possible margin. Value indicators such as net present value and the benefit-cost ratio are used to determine how much value cushion

exits between the investor's equity contribution and the present value / worth of equity benefits generated by the project. The following value tests should be accomplished in order, and a proposal should be dropped or revised if it does not measure up after any one of these tests.

Value Test # 1: Property residual value > initial project cost

Value Test # 2: Before tax total investment value > property residual value

Value Test # 3: Before tax equity investment value > initial equity contribution

Value Test # 4: After tax total investment value > before tax total investment value

Value Test # 5: After tax equity investment value > total equity contribution

Value Test # 6: Before tax net present value > 0

Value Test # 7: Benefit-cost ratio > 1

Profit Analysis

Ultimately, real estate is judged on its ability to produce a surplus. An investor analyzing a possible real estate deal should determine which profit centers can be retained based on available resources. A capital investment, such as an equity contribution or business expertise such as property management experience, may be the resource needed to capture the profit center.

The feasibility analysis usually focuses on annual cash flow and final sale proceeds as primary sources of profit, but there are a variety of other profit centers in a real estate venture. Property appreciation can be created by innovative land use planning and zoning negotiations. Brokerage, leasing, syndication, design, engineering, construction, legal, accounting, and property management services can be internally

provided by the real estate enterprise itself. In measuring the impact of each of these profit centers, the analyst should estimate the cost above which additional value is created and the potential risk that is assumed as a result.

Typically, investors use only two or three measures of project performance to review and rank-order the most attractive alternatives. Almost without exception, profitability measured by rate of return and investment yield are included among these key indicators. These measures are also useful for comparing project performance to other investments of similar value and risk.

Profit Test # 1: Annual productivity index > anticipated market cap rate

Profit Test # 2: Before tax cash rate of return > average mortgage interest rate

Profit Test # 3: After tax cash rate of return > average mortgage interest rate

Profit Test # 4: Before tax internal rate of return (IRR)> effective mortgage interest rate

Profit Test # 5: After tax modified IRR > after tax equity discount rate

Risk Analysis

Risk is the difference between expectations and realizations. An essential element of real estate decision-making is determining the risk probability inherent in each option being considered. By understanding the nature of these risks, one can then decide on a real estate strategy which will control the adverse consequences and capitalize on the opportunities associated with the project.

Risk analysis must achieve two objectives to be useful in formulating a real estate strategy. The developer / investor must identify and quantify the uncertainty or

risks intrinsic in each project proposal and, at the same time, determine his/her tolerance for these risks. Each investor has a “pain threshold” based on financial reserves, management skills, and time available to control or minimize risk. All risk checks have one common objective, to measure the variance between estimated performance of the project and comparable or predetermined standards. The following examples are the most commonly used risk measures for income producing properties.

Risk Test # 1: Operating expense / outgoings ratio $\not>$ comparable properties

Risk Test # 2: Default ratio < (1.0 – the vacancy rate)

Risk Test # 3: Average breakeven rent < average net effective rental rate

Risk Test # 4: Creative financing effective mortgage interest rate (EMIR) < amortized mortgage interest rate

Risk Test # 5: Debt coverage ratio > 1

Risk Test # 6: Before-tax equity payback achieved before target year

Risk Test # 7: Before-tax net worth > initial equity contribution

Risk Test # 8: Do actual percentage contributions to internal rate of return (IRR) from before tax benefits match predetermined targets?

Risk Test # 9: After-tax equity payback achieved before target year

Risk Test # 10: After-tax net worth > total equity contribution

Risk Test # 11: Do actual percentage contributions to modified internal rate of return (MIRR) from after-tax benefits match predetermined targets?

Example # 3: Graaskamp and Sharkawy Model - Revised Multidisciplinary Development Planning Model (RMDPM)

This decision-making model[3] was first developed by J. Graaskamp and A. Sharkawy and named as the Multidisciplinary Development Planning Model in 1971. In 1975, the subject model was revised by A. Sharkawy and remodeled as shown in figure 5 and table 1 (Sharkawy, 1994; Sharkawy, 1975).

The model begins by identifying the strategic objectives and priorities of the production group, namely, the developer, the equity investors, the lenders and the public enterprise, to narrow down tactical alternatives.

Financial Side

The *financial side* of the model involves three processes: *market analysis*, *marketability analysis*, and *financial modeling*. Recognizing that it is market absorption that drives the real estate cash cycle, this deductive inference-centered segment of the RMDP Model is structured to first define market trends in the aggregate, then to narrow down opportunity areas through market segmentation.

Next, consumer profiles and merchandising targets are identified; and product differentials, price specifications, effective demand, and preferred marketability methods are defined. The third process of financial modeling involves establishing a back-door / front-door analysis. Finally, a detailed financial modeling takes place where estimation of the required capital budget and identification of the financial resources and terms for equity and debt are clarified. It also projects operating budgets and revenue sources,

[3] As cited in Sharkawy, 1994 and Sharkawy, 1975

evaluates direct cash profit expectations, and pinpoints indirect profit centers and returns. Measurement of risks and yields is accomplished by a computerized discounted cash-flow modeling (Sharkawy, 1994; Sharkawy, 1975).

Figure 5
Inductive Reasoning & Deductive Inference in the RMDPM

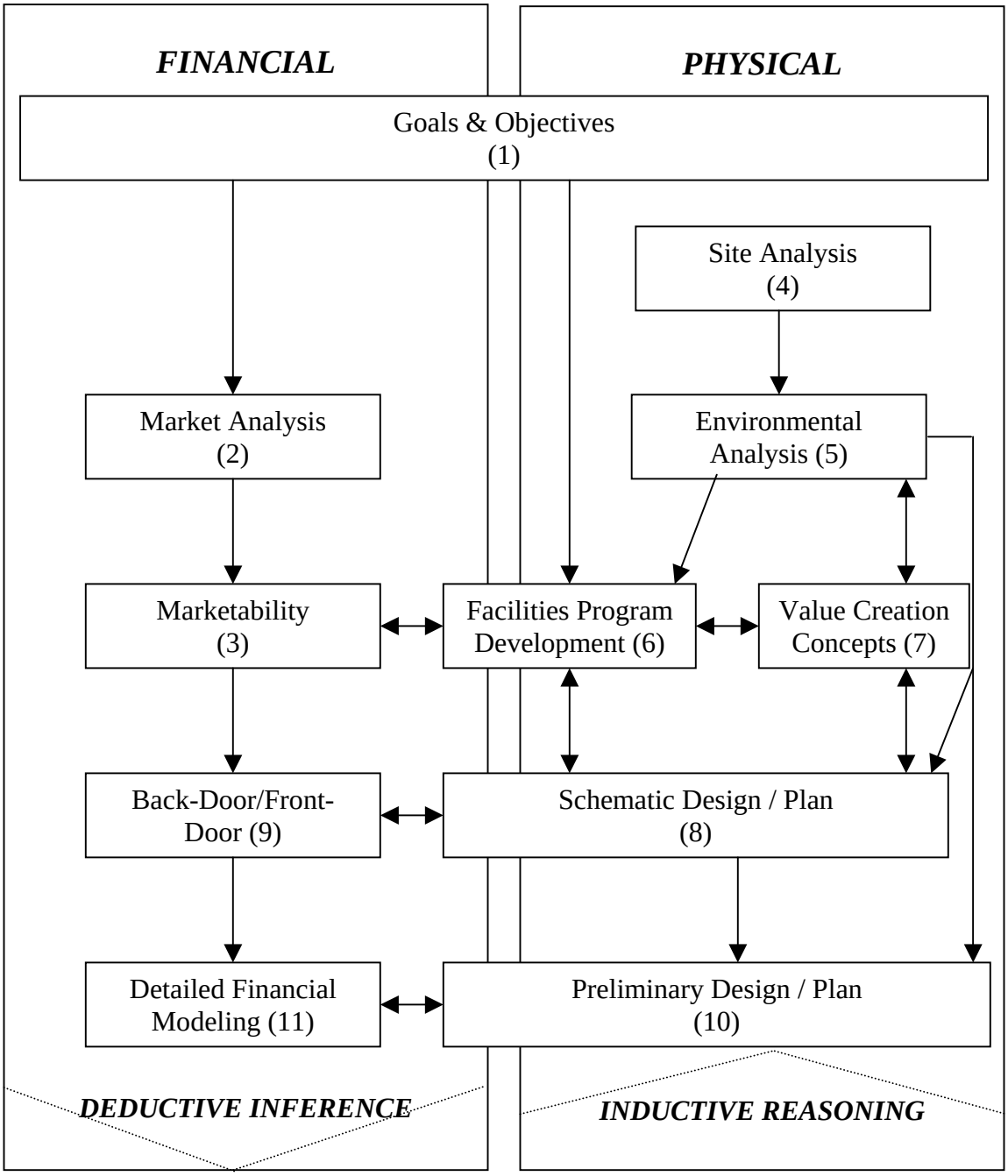


Table 1
The Revised Multidisciplinary Development Planning Model (RMDPM)

1. Goals & Objectives
2. Market Analysis
    - 2.1. Market Trends & Segmentation
    - 2.2. Consumer Profiles
    - 2.3. Supply & Demand
    - 2.4. Occupancy & Absorption
3. Marketability
    - 3.1. Market Standards & Differentials
    - 3.2. Merchandising Strategy
    - 3.3. Potential Marketing Programs
4. Site Data
    - 4.1. Zoning & Utilities
    - 4.2. Circulation & Traffic
5. Site Analysis
    - 5.1. Environmental Suitability Analysis
    - 5.2. Access & Linkages
6. Facilities Program Development
    - 6.1. Product Mix & Amenities
    - 6.2. Space Requirements
    - 6.3. Functional Analysis
7. Value Creation Concepts
    - 7.1. Optimizing Capital Cost
    - 7.2. Adapting to the Environment
    - 7.3. Responding to Psycho cultural Profiles
    - 7.4. Achieving Product Synergy
8. Schematic Design / Plan
    - 8.1. Problem Structure – Diagram
    - 8.2. Design / Plan Scheme
    - 8.3. Preliminary Cost Estimate & Schedule
9. Back-Door / Front-Door Modeling
    - 9.1. Using Gross Income Multiplier
    - 9.2. Using Capitalization Rates
10. Preliminary Design / Plan
    - 10.1. Material & Detail Files
    - 10.2. Preliminary Plans & Elevation
    - 10.3. Revised Cost Estimates & Schedules
11. Detailed Financial Modeling
    - 11.1. Capital Cost Components
    - 11.2. Equity – Debt Plan & Timeline
    - 11.3. Risk Assessment

Physical Side

The *physical side* of the RMDP Model involves five inductive reasoning-based processes dealing with the *site analysis*, *environmental analysis*, *the development's facilities program, a framework of value creation concepts for design, schematic design plans and preliminary design plans*. The environmental aspect of the model inventories the site's biota and abiota and utilizes a suitability analysis technique to enable the planner to avoid limitations imposed, and to capitalize on opportunities offered by, the natural environment.

The facilities program development involves identifying the project's basic components based on product mix and merchandising cycles, selecting amenities based on use cycles and participation rates, and providing the related service components. The model then formalizes the synthesis process by outlining the needed framework of concepts, ideas, and partial solutions to generate alternative concept plans (Sharkawy, 1994; Sharkawy, 1975).

Office Development

According to the Urban Land Institute (Gause, 1998), among the various segments of the real estate development industry, ***office development*** is possibly the most complex and competitive while also being one of the most potentially rewarding. The main reason for this is possibly the vital significance of the business that takes place in these office buildings and their influence on the country's economy. A developer analyzing the feasibility of a new office building, or an investor considering the acquisition or disposition of an existing building, must evaluate the building relative to

other office space that exists in the marketplace. Therefore, it is necessary to differentiate office space based on various building features and characteristics (Gause, 1998). Office space can be categorized in several dimensions including:

- Class,
- Location,
- Size and flexibility,
- Use and ownership, and
- Building features and amenities.

Since, according to R. Peiser (1992) and the Urban Land Institute (Gause, 1998), the most basic feature of office space is its quality or class. In this study, the ***class*** dimension will be the main determinant to categorize the office space under consideration. When determining the class of an office building, the relative quality of a building is determined by taking a number of characteristics into account, including its age, location, building materials, building systems, amenities, lease rates and terms, occupancy, management, and tenant profile (Peiser, 1992; Gause, 1998). Office space is generally divided into three classes:

1. Class A: Investment-grade buildings, generally the most desirable in their markets, offering an excellent location and first-rate design, building systems, amenities, and management. ***Class A buildings*** command the market's highest rents and generally attract creditworthy tenants.
2. Class B: Buildings with good locations, management, and construction, and little functional obsolescence or deterioration. ***Class B space*** is typically

found in well-located buildings of an earlier generation that have been maintained to a high standard.

3. Class C: Buildings that are substantially older than Class A and Class B buildings and that have typically not been modernized. Class C buildings are often plagued by functional obsolescence, generally being between 15 and 25 years old with steady, but often poor occupancy.

Office Development Investment Decisions

For any real estate investment to be successful a careful analysis of the many contingencies on which the decision depends is required and office development is no exception. As stated by Jaffe and Sirmans (Freeman, 1987) an overview of the real estate investment process consists of five basics steps:

1. Identify the objectives, goals and constraints of the investor,
2. Analyze the investment environment and market conditions,
3. Develop the financial analysis and forecast cash flows from the project as well as the costs of the investment,
4. Apply the decision-making criteria which will convert the expected benefits or cash flows into a value estimate for the investor,
5. Make the investment decision.

This investment process is essentially an orderly procedure that considers the influence of various factors affecting the feasibility of an investment. Second and third steps, which will be called the ***market analysis*** and ***financial feasibility analysis***

respectively throughout this study, are the heart of the ***project feasibility analysis*** and lead the decision maker to a final go/no-go decision.

Since the development decision is, in essence, an investment decision, the development analysis encompasses all aspects of investment analysis (Wurtzebach & Miles, 1994). However, in the development situation greater uncertainties result from the fact that the space being considered has not yet been created. It is useful to examine the characteristics which complicate real estate decisions to understand the basics of the office development process and the market in which these decisions are made.

Real estate investments are generally regarded as risky because of the unique characteristics of real estate, with three being the most important. First, real estate investments are physically immobile – they cannot be moved. Second, they have a long economic life – they must produce cash returns over a long period if their cost is to be recovered. Third, they have a large economic size – a single property requires a large dollar investment compared to the minimum purchase of common stock, for example (Etter, 1995; Ford, 1994; Graaskamp, 1991c). In addition to these inherent characteristics, investment in real estate is further complicated by the inefficiency of the market in which it operates (Etter, 1995). An investment market is generally classified as inefficient if it possesses one or more of the following:

1. High transaction cost – investors are charged substantial fees for each individual transaction,
2. Limited or costly information – information is either difficult to obtain or cannot be obtained without undue cost,

3. Disagreement on information – there is a general lack of agreement on what impact the information has on prices (Etter, 1995).

In relation to these generic characteristics of real estate development, there are some supplementary specifications unique to office developments that are worth mentioning. For example, as Freeman (1987) states there are also some inherent advantages to investing in office development. The income streams derived from well-located buildings with financially sound tenants are generally stable and continue over a reasonably lengthy period of time. If the lease is subject to standard arrangements – that is the lessee (or tenant) paying expenses above a pre-determined amount – the investor can expect periodic income increases, while being protected against rising expenses. Good office real estate is similar to other types of real estate investment in that it is generally a good hedge against inflation, and capital growth can be expected. Taxation benefits that result from interest and depreciation deductions are also associated with these developments.

As Freeman (1987) further contends, the difficulty in estimating potential demand and the long development time frames highlight an important area of consideration leasing the office building. The optimal situation is to have the building pre-leased with rentals established at time of occupation, so upon its completion the building is immediately leased. Holding costs will escalate and profit diminishes if the completed building stands vacant for any length of time.

Additionally, the unpredictability of future events, which may cause changes in rental rates, buildings costs, inflation and interest rates together with changing tenant

requirements – such as air conditioning, computer facilities, sizes of required spaces and changing locational preferences – may result in a building becoming obsolete even before construction is complete. Such an outcome prevents buildings from achieving the forecasted net operating income, reducing their market value significantly. In worst-case scenarios, brand new office buildings may not be occupied at all, leaving the space totally vacant and possibly resulting in a long run burden to the community. Thus, any new office additions must be carefully studied and analyzed.

Project Feasibility Analysis

Project feasibility analysis is the process by which developers and investors assess the economic viability of a prospective office development before they commit to the undertaking (Gause, 1998). Feasibility analysis is not a substitute for the developer's vision, experience, and common sense. However, it is a counterbalance to the storied optimism of developers – a reality test, since often it is this optimism that can shade the unrealistic expectations for a project under consideration.

The process of analyzing the feasibility of a prospective office development has two principal components; ***market analysis*** *– also called market research or market study in some sources* and ***financial feasibility analysis*** *– also called economic study in some sources* (Arnold, 1983; Barret & Blair, 1988; Canestaro, 1989; Freeman, 1987; Etter, 1988; Etter, 1995; Wurtzebach & Miles, 1994; Peiser, 1992; Gause, 1998). Office developers and investors use both market analysis and financial feasibility analysis to identify and evaluate opportunities for constructing new office buildings and for positioning existing buildings to attract different segments of the market.

In project feasibility analysis, the market analysis is carried out first, followed by the financial feasibility analysis. In financial feasibility analysis, data collected in the market analysis is used to evaluate the potential profitability of an investment in the proposed development. Just as the market analysis was designed to evaluate the acceptability of the project in a market sense, the financial feasibility analysis will evaluate the attractiveness of the project in an economic sense (Wurtzebach & Miles, 1994).

Market Analysis

Graaskamp (1996) defines market analysis as analysis of secondary data sources to define trends, patterns of geographic fragmentation, and clusters of market segmentation [that] scale the size of any enterprise opportunity and provide a link between site and marketplace. In other words, he argues that market analysis involves any investigation that permits focusing of a real estate project on selected segments of consumers with a unique unfilled product and location requirement (market gap) combined with a point in time when supply alternatives are limited (market window).

As shown in table 2, Miles, Haney and Berens (1994) point out that there are two essential dimensions of market analysis: macro dimension (market) and micro dimension (individual property).

Table 2
Interrelating the Two Essential Dimensions of Market Analysis

Dimension	**Present**	**Future**
Macro (Market)	*Current & Historical*	*Market Forecasts*
	- supply by segment - demand characteristics . preferences . income . tenant types - absorption & vacancies - rents & value (cap rates)	- supply by segment - demand characteristics . employment growth . population growth . space needs - absorption & vacancies - rents & value (cap rates)
Micro (Individual Property)	*Subject Property & Comparables*	*Future Performance of Subject Property*
	- unit size & quality - demand characteristics . preferences . income . tenant types - operating expenses - absorption & vacancies - rents & value (cap rates)	- operating expenses - absorption & vacancies - net operating income - market value

Furthermore, according to Graaskamp (1996), critical questions to be answered by market research models must focus on the following basic topics, which represent the building blocks of market strategy and positioning:

1. Potential market gap opportunities consistent with enterprise abilities to capture that particular segment,
2. Profile of prospect psychographics (study of life styles),
3. Proportion of population meeting prospect profile,
4. Profile of competitive supply meeting prospect needs,
5. Proportion of supply historically provided in each period (absorption rate),
6. Product and service standards (defining competitive standards),

7. Product and service differentiation (providing competitive edge),
8. Product and service pricing matrix,
9. Potential elasticity of revenue,
10. Pace and phasing of production including economies of scale required for pricing,
11. Penetration required into prospect profile group as a percentage of period supply (capture rate),
12. Profile of political power segment within entitlement process,
13. Psychographics of the voting constituencies determining entitlement,
14. Preconditioned mindset of the capital sources financing the real estate decision,
15. Psychographics of the enterprise's personnel in terms of suitability to the task at hand.

An office development generally proceeds on the basis of a succession of market analyses. Barrett & Blair (1988), Etter (1988; 1995), Peiser (1992), Gause (1998), and Wurtzebach & Miles (1994) discuss various types of studies that can be undertaken during this process. Each of these studies is undertaken to answer different questions. Not every project requires all of these studies.

That is why in this research, all of these various types of studies from all of the above sources are analyzed and reduced to a list. This list is used both in the preparation of the matrix (appendix A) and in the formation of semi-constructed interview questions (appendix B) that will be used in the data analysis section. Although this list is not

exhaustive, its intent is to cover the most important aspects necessary for the successful market analysis of a lucrative office development. Because of the importance of this list to the study, the studies included in the list have been carefully selected and kept to the same level of detail to prevent any confusion.

Financial Feasibility Analysis

Following the market analysis, the second major component of a project's overall feasibility analysis is the financial feasibility analysis. The financial feasibility analysis enables developers to determine if a proposed project will generate enough cash flow to pay the debt service on construction and permanent loans and provide an adequate return on the equity capital invested in the project (Gause, 1998). A project's feasibility is a function of its expected cost, its expected operating performance, the lender's requirements, the mortgage market conditions and the developer/investor's required rate of return (Etter, 1988). As Canestaro (1989) states, there are three basic rules for measuring a project's financial feasibility, all evaluated in the context of time:

1. The value of benefits generated by a project must exceed the capital investment,
2. The annual benefits must generate profits in excess of the investors' desired rate of return,
3. There must be a minimal difference between the anticipated project risk performance and the results of your feasibility analysis simulation.

Since several sources (Arnold, 1983; Canestaro, 1989; Etter, 1988; Etter, 1995; Peiser, 1992; Gause, 1998; Wurtzebach & Miles, 1994) also mention various key elements for this stage, an approach similar to the market analysis section is adapted and

a list, intended to guide users to a successful office development, is created for the financial feasibility analysis (appendix A).

Brief Overview of Turkish Real Estate Market

As stated in NAIPega's Market Overview Report (November 2002), the real estate market in Turkey has made spectacular advances in the past 10 years when the first high-rise buildings began to appear in Istanbul (see appendix E for more information on the political, economic and corporate system of Turkey). However, the market still remains immature.

Despite the limited supply of investment instruments until recently, real estate has long been considered as a relatively safe and popular choice for private investment in Turkey. In the last two decades, its attractiveness has increased due to factors like urban immigration, new commercial developments and increasing demand for new office space of higher standards. Investment in real estate acts as a hedge against inflation. The sector proved its vitality during the 1994 crisis. It recovered rapidly and, in the retail sector, prices were unaffected. A large number of retail developments have appeared in the form of shopping malls and hypermarkets. New investments began to focus on the high demand in the residential sector.

The investment market is composed of corporate investors, private investors and Real Estate Investment Trusts (REITs), known as Real Estate Investment Companies (REICs)[4] in Turkey. The introduction of REICs in 1997 enabled foreign capital to invest

[4] Information used here is gathered from the websites of the currently active REICs in Turkey.

in the sector for the first time (see Appendix F for more detail on general regulations for REICs).

There are currently 11 REICs in the market with eight of these being traded on the Istanbul Stock Exchange. For the existing REICs listed on the Istanbul Stock Exchange the total REIC portfolio equals to $700 million in value. REICs invest in residential and commercial real estate, with the two largest funds operating exclusively in the commercial sector. One REIC invests exclusively in the residential sector.

The major problem in the real estate sector has been the high cost of capital. The non-existence of financing resources means that landowners and developers must fund the vast majority of development projects themselves. Banks prefer not to make long or medium term loans due to high and unpredictable inflation rates. These high inflation rates lead people to government-supported housing projects and co-operative schemes. This situation, however, is arguably due to the recent strict economic policy of the government to reduce and stabilize the rate of inflation. Money will seek new directions as bank rates and bond yields continue to plunge under the government's ambitious inflation reduction program. Individual investors will rearrange portfolios in favor of mutual funds and equity instruments. In addition, real estate agencies anticipate a significant boom in the demand for property as soon as the economic crisis ends. Real estate prices are still in the trough of the business cycle and most investors are expected to make buying decisions for property.

A major obstacle in the Turkish real estate market is the absence of a mortgage system and similar long-term financing for property buyers. However, the Housing

Administration, and various banks and financial institutions, both domestic and international, are currently working on projects to create a mortgage system in the country. The Housing Administration has prepared a regulation for the purchasing and securitization of mortgages.

The following section contains details regarding the office market in Istanbul, which is by far the biggest in the country. It is estimated that a considerable portion of the total national real estate value is in properties located in and around Istanbul. This is primarily why this study will focus on the Istanbul market.

Office Market in Istanbul, Turkey

Metropolitan Istanbul consists of 33 municipalities that are located in two continents: Asia and Europe (figure 6). The European side of Istanbul is the commercial district while the Asian side is basically residential.

The central business district (CBD) of Istanbul lies along the northbound Buyukdere Caddesi between Mecidiyekoy and Maslak on the European side of the city (red circled region on the map). Most of the Class A buildings and multinational corporations are concentrated in this region. Rental rates here are generally quoted in US dollars per square meter per month, although some leases require payments in TL. Other suburban business districts are the Kavacik, Altunizade and Kozyatagi districts located on the Asian side (yellow, purple and green circled regions on the map, respectively).

Approximately 44 buildings in the CBD and 116 buildings in the suburban CBD are considered to be Class A and Class B office buildings. Office leases in Istanbul are triple-net, with the tenant responsible for monthly common area charges (currently

between 1.50 and 4.50 USD/m^2/month), and applicable taxes (VAT of 18% if the landlord is a corporate entity or withholding tax of 22% if the landlord is a private individual).

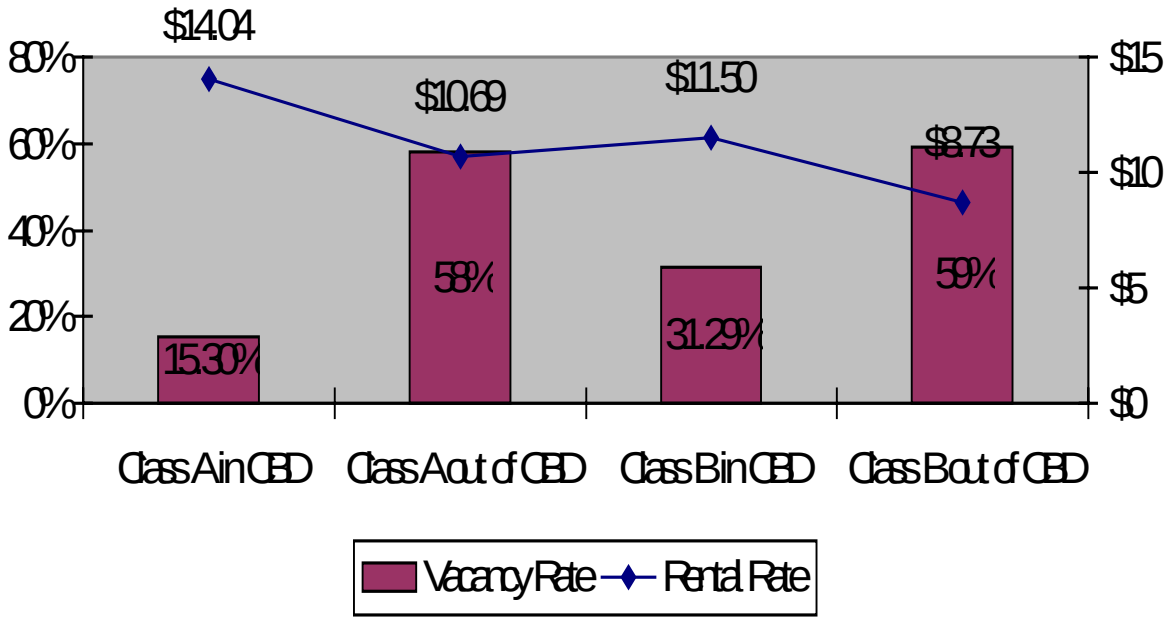
Figure 6
Map of the Metropolitan Istanbul Area

The average GLA (Gross Lot Area) of Class A buildings on the European side of Istanbul is 16,200 m^2. The office market on the Asian side is somewhat different from that of the European side. The office buildings on the Asian side are smaller, at an average of 6,200 m^2, even smaller than they used to be. A considerable number of them are owner-occupied as well.

Although the Levent-Zincirlikuyu-Maslak axis is the trade and finance center of Istanbul, some multinational firms have already moved to the Asian side because of congested traffic, difficult access, noise, pollution and lack of parking on the European side. Many other companies are considering similar moves. Kozyatagi and Kavacik are the newly emerging rivals to the Levent-Zincirlikuyu-Maslak axis, offering new Class A office space at reasonable rents.

The following figure (figure 7) depicts average rental rates and vacancy rates for both Class A and Class B office buildings located in and out of the CBD as of November 2002 (NAIPega, 2002). Based on figure 7, it is NAIPega Worldwide Commercial Real Estate Services' opinion that Class A and Class B office buildings located outside the CBD are often constructed indiscriminately with no regard to their feasibility, and as such exhibit the highest vacancies, currently over 58%, and 59% respectively. Below, more detailed information for each of the major districts is provided based on the Kuzeybati Worldwide Real Estate Services' May 2003 report, the most recent report available (NAIPega, Nov. 2002; Colliers Resco, Dec. 2002).

Figure 7
In & Out of CBD, Class A & B Vacancy and Rental Rates for Nov. 2002



CBD Market Overview

The Istanbul ***CBD*** is located in the Besiktas – Levent – Maslak corridor. In the ***Levent District***, the most popular district in CBD, the vacancy rate decreased by 0.99% in May 2003 compared to November 2002, attaining the lowest level of the previous two years at 7.45%. The table below summarizes the vacancy rates and total office availability in corresponding periods.

Table 3
Class A Office Vacancy Rates and Total Availability in the Levent District

Date	Vacancy Rate (%)	Total Availability (m2)
10 October 2001	9.58 %	35,381
15 July 2002	11.24 %	42,705
21 November 2002	8.44 %	32,085
10 May 2003	7.45 %	30,781

According to the report, gross rental rates in the Levent District, which were in the range of 16–17 USD/m^2/month in November 2002, had dropped to 14.57 USD/m^2/month on average as of May 2003. Although an increase in office supply in the Levent District and a decrease of rental rates were expected in the coming months, vacancy rates were predicted to be 11-13% after the introduction of new office buildings to the market.

In the ***Maslak District***, which is popular as an alternative to the Levent District, vacancy rates had decreased by 1.19% in May 2003 compared to November 2002 reaching 38.39%. The average rental rates in Maslak district had continued to decline compared to previous periods, reaching the gross value of 11.38 USD/m^2/month, the lowest level in the previous two years. Based on this value, the rate of decrease since November 2002 was 14.51%. The following table shows the vacancy rates and total office availability in corresponding periods.

Table 4
Class A Office Vacancy Rates and Total Availability in the Maslak District

Date	Vacancy Rate (%)	Total Availability (m2)
10 October 2001	40.05 %	118,649
15 July 2002	40.11 %	118,836
21 November 2002	39.57 %	117,238
10 May 2003	38.39 %	115,895

Suburban CBD Market Overview

The Suburban Central Business District of Istanbul Anatolian Side is primarily composed of the Kozyatagi, Altunizade and Kavacik Districts. The Umraniye district, a newly developing business community, has been added to the district as well.

In the ***Kozyatagi District***, which covers the major part of Anatolian Side Class A office stock, the vacancy rate, which was well above the 40% mark in the previous year, had declined to 42.17% based on the May 2003 research (table 5). According to the same research, the vacancy rate in the Kozyatagi district was forecast to be in the range of 30-40% during the next few years.

Table 5
Class A Office Vacancy Rates and Total Availability in the Kozyatagi District

Date	Vacancy Rate (%)	Total Availability (m2)
10 October 2001	37.52 %	82,789
15 July 2002	43.39 %	107,445
21 November 2002	42.49 %	105,208
10 May 2003	42.17 %	104,423

In accordance with the May 2003 research, gross rental rates in the Kozyatagi district were between 13 and 15 USD/m^2/month in October 2001, declining to 13.72 USD/m^2/month by June 2002, 12.91 USD/m^2/month by November 2002 and 11.98 USD/m^2/month by May 2003. In the coming period, no increase in rental rates was expected. Following is a table displaying the results of this research.

In the ***Altunizade District***, vacancy rates had declined to 33.3%. May 2003 research in the Altunizade district showed that the gross rental rates had reached 14.63 USD/m2/month, a small decrease compared to previous periods. In 2003 this slow decrease continued. Below is a table showing the vacancy rates and total availability in the corresponding periods.

Table 6
Class A Office Vacancy Rates and Total Availability in the Altunizade District

Date	Vacancy Rate (%)	Total Availability (m2)
10 October 2001	25.12 %	28,273
15 July 2002	40.06 %	47,582
21 November 2002	39.49 %	46,907
10 May 2003	33.35 %	41,041

The Kavacik District, a newly developing business community, has been largely unsuccessful in attracting high quality tenants. Along with infrastructure problems involving transportation, power, parking and telecommunications, lack of quality housing around the district has led to an increase in vacancy rates within the district. The following table shows vacancy rates and total availability figures for the district during the corresponding periods.

Table 7
Class A Office Vacancy Rates and Total Availability in the Kavacik District

Date	Vacancy Rate (%)	Total Availability (m2)
10 October 2001	43.06 %	35,951
15 July 2002	46.61 %	49,168
21 November 2002	43.28 %	45,659
10 May 2003	38.64 %	41,860

Vacancy rates in the Kavacik District, which were above 40% during 2001 & 2002, declined to 38.6% according to the May 2003 research. During the following periods in the Kavacik District, the increase in the office stock was forecast to be relatively small. A decrease in vacancy rates was expected to continue as well. Rental rates in the Kavacik District had reached 8.45 USD/m^2/month, a small decrease

compared to the previous period. Unless buildings in the district are improved, vacancy rates are expected to reach 35-40%.

As of May 2003, when the overall situation in Istanbul office market is analyzed, it is clear that the demand for office space is well below the supply because of extensive new construction and market stagnation as a result of the throes of an economic crisis. Vacancy rates are critically high, especially on the Asian side and other non-CBD areas, mainly due to the influx of more modern, newly completed buildings constructed without the appropriate market and/or financial feasibility analysis.

In addition, the local market is replete with buildings that are mistakenly classified as Class A type[5]. Because they are included in the reports, they contribute to a skewed vacancy rate and will remain largely vacant. On the other hand, the better-located and higher quality buildings that have been developed according to the international requirements and standards typically enjoy higher occupancy rates.

[5] While International Standards call for minimum floor plate size of 500 m^2 for Class A consideration, in Turkey, some buildings with slightly smaller floor plates may be considered Class A if they meet the other criteria (NAIPega, November 2002).

CHAPTER III

METHODOLOGY

In this chapter, first the design of the study is explained. This is followed by the elucidation of the sample selection and the data collection processes. Data analysis and interpretation of the data is then described. Subsequently, details relating to reporting the data to the interviewees and issues of reliability, validity and researcher bias are discussed.

Study Design

As Smith and Heshusius (1986) state, the interpretation given to the practices and results of research differs depending on the logic of justification one accepts. For quantitative inquiry, phrases such as “research has shown…” and “the results of research indicate…” are claims to an accurate reflection of reality or the claim of certitude that one has discovered how some bit of the social world really exists. For qualitative inquiry, these phrases are an interpretation that, to the extent that it finds agreement, becomes reality for those people at any given time and place. The former expresses certitude; the latter presents a description constrained by values and interests to be compared with other descriptions, which are also constrained by other values and interests. These differences in the meaning of research results can be best explained by highlighting the basic characteristics that set the qualitative paradigm apart from the quantitative paradigm (Firestone, 1987; Merriam, 1998; Bogdan & Biklen, 2003).

The first major characteristic of qualitative research is: qualitative researchers are *interested in understanding the meaning people have constructed (*Merriam, 1998), that is, how they make sense of their world and the experiences they have had in the world. Quantitative research, in contrast, dissembles a phenomenon to examine component parts (becoming variables of the study). Therefore, qualitative research can reveal how all the parts work together to form a whole. It is assumed that meaning is embedded in people's experiences and that this meaning is mediated through the investigator's own perceptions. The key concern is the researcher's ability to understand the phenomenon of interest from the participant's perspectives.

The second characteristic of qualitative research is: the *researcher is the primary instrument for data collection and analysis (*Merriam, 1998). Data are mediated through this human instrument, the researcher, rather than through an inventory, questionnaire, or other objective instrument for collecting data.

A third characteristic of qualitative research is that: *it usually involves fieldwork (*Merriam, 1998). The researcher must physically visit the people, setting, site, and institution in the field to observe behavior in its natural setting.

Fourth, qualitative research *primarily employs an inductive research strategy (*Merriam, 1998). That is, this type of research attempts to construct abstractions, concepts, or theories. Often, qualitative studies are undertaken because there is a lack of theory, or existing theory fails to adequately explain a phenomenon.

Finally: since qualitative research focuses on process, meaning, and understanding, *the product of a qualitative study is richly descriptive*. Grounded theory is a specific research methodology introduced in 1967 by sociologists Glaser and Strauss (Merriam, 1998). As is true in other forms of qualitative research, the investigator as the primary instrument of data collection and analysis assumes an inductive stance and strives to derive meaning from the data (Merriam, 1998). The end result of this type of qualitative research is a theory that emerges from, or is grounded in, data. Rich description is also important but is not the primary focus of this type of study. As Strauss and Corbin (Merriam, 1998) note, the major difference between this methodology and other approaches to qualitative research is its emphasis upon theory development. Merriam (1998) states that the type of theory developed is usually "substantive" rather than formal or "grand" theory, which has a specificity and hence usefulness to practice that is often lacking in theories that cover more global concerns.

As I have previously stated, in most European countries, including Turkey, real estate is not recognized as a distinct discipline or topic for study, which leaves me with no existing theory. That is why in this research I followed an inductive research strategy (specifically, grounded theory approach) while examining the go/no-go decision-making process decision-makers use. With the use of qualitative research, I tried to analyze the steps senior level managers go through when making a go/no-go decision for the development of office projects.

Since there are no generally accepted rules or theory base throughout the profession, I sought to discover the logical sequence that people have individually

created from their previous professional experiences and descriptions of their unique way of doing business. I was the primary research instrument for data collection and analysis. My methodology was field interviews with industry professionals to understand their decision-making phenomena, making the design of this study a perfect match for a qualitative inquiry using the grounded theory approach.

Sample Selection

According to Merriam (1998), there are two basic sampling types: probability and non-probability sampling. Probability sampling is typically used to generalize results of the study from the sample to the population from which it was drawn. However, since generalization in a statistical sense is not a goal of this study, non-probability sampling is the method of choice. This study used the most common form called purposive or purposeful sampling. Patton (1990) states that purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned. Some of the more common types of purposeful sampling are typical, unique, maximum variation[6], convenience[7], snowball, chain and network sampling[8].

---

[6] *Maximum variation* sampling was first identified by Glaser and Strauss (Merriam, 1998) in their book on grounded theory. A grounded theory, it was reasoned, would be more conceptually dense and potentially more useful if it had been "grounded" in widely varying instances of the phenomenon.

[7] *Convenience* sampling is just what is implied by the term – you select a sample based on time, money, location, availability of sites or respondents, and so on.

[8] *Snowball, chain or network* sampling is perhaps the most common form of purposeful sampling. This strategy involves asking each participant or group of participants to refer you to other participants.

For the purpose of this study, I have targeted both REICs and construction companies that have developed at least one Class A office building in a region that was previously discussed as problematic in Istanbul, Turkey (see Review of Literature chapter of this study for more detail). As noted earlier, there were eleven REICs in the Turkish market at the time, with eight of them being traded on the Istanbul Stock Exchange. However, not all eleven REICs develop office projects. I targeted my purposeful sample on five REICs that invest in office projects for the purpose of this study through maximum variation sampling. Other than these five REICs, I also sought out the major construction companies that deal with office development in Istanbul, Turkey through a convenience and/or networking sampling (two different types of purposeful sampling). Eight of the most well known companies were targeted as the potential sample to interview.

The next step in my methodology was to select real estate professionals that would be interviewed within each company chosen for this research. Only senior level management personnel who had developed at least one Class A office project while working for that particular company and who had the ability to make “go/no-go decisions” in the pre-development stage of office development projects were interviewed. This enabled a one-stop collection of all required information to help understand the decision-making processes of office development projects undertaken by these companies.

Data Collection

Data conveyed through words have been labeled qualitative, whereas data presented in numerical form are quantitative. Qualitative data consist of “direct quotations from people about their experiences, opinions, feelings and knowledge” obtained through interviews; “detailed descriptions of people’s activities, behaviors, actions” recorded in observations; and excerpts from various types of documents (Patton, 1990). “Collecting” data always involves selecting both data and the techniques of data collection. Interviewing is probably the most common form of data collection in qualitative studies and is also the technique that I have chosen to collect data for my inquiry.

An interview is a purposeful conversation, usually between two or sometimes more than two people (Bogdan & Biklen, 2003) that is directed by one party to obtain information from the other. Since the major purpose of an interview is to obtain a special type of information, mainly to understand what is “in and on someone else’s mind” (Merriam, 1998), face-to-face interviews were chosen as the primary data collection method in order to understand the phenomena in this study. In view of the fact that the sole purpose of these interviews were trying to comprehend and illustrate how Turkish developers deal with go/no-go decisions, a semi-constructed interview approach (Bogdan & Biklen, 2003), which is a mix of more- and less-structured questions, was found to be most appropriate.

By choosing this type of structure, advantages from both ends of the spectrum were targeted. Predetermination of the wording and order of some of the questions were

extremely crucial in formulating the decision-making processes of companies, especially when I needed each interviewee to either respond to a particular statement and/or to define a particular concept or term (see appendix B for the interview questions). However, I also needed to use a conversational approach to allow the participants to reveal their own perspectives and understandings of the phenomena. Determining the unique approaches of go/no-go decisions was the key to this study. Furthermore, use of the semi-constructed approach allowed me to respond: to the differences among approaches, to the emerging view of the respondent, to the unique ways of doing business, and to new ideas on the topic in a timely manner to further question the respondents where required.

Initially, a total of thirteen face-to-face company interviews were conducted using a semi-constructed interview approach. Each interview lasted 2 to 2 ½ hours. The purpose of these interviews was to understand the decision-making model being used throughout the pre-development stage of the office development projects within each company. Structured interview questions were prepared to obtain three different segments of data. Questions 1 - 13 were generic questions designed to understand the general decision-making approach of each company. Questions 14 - 24, were seeking answers to the market analysis portion of the projects' feasibility analyses. Questions 25 - 30 were used to understand the financial feasibility analysis portion of the projects' feasibility analyses.

As Merriam (1998) emphasizes, the key to getting good data from an interview involves asking good questions. Furthermore, different types of questions will often lead

to different data results. Thus, the way in which questions are worded is a crucial consideration in extracting the type of information desired. According to Patton (1990) there are six main types of interview questions: experience/behavior questions, opinion/value questions, feeling questions, knowledge questions, sensory questions, and background/demographic questions. Questions may be followed by probes (i.e. detail-oriented, elaboration, clarification, contrast) and follow-up questions to deepen responses and increase the richness of the data. Questions that should be avoided while interviewing are multiple questions (either one question that is actually a double question, or series of single questions that does not allow the respondent to answer one by one), leading questions and yes-or-no questions (Merriam, 1998).

Keeping these facts in mind, I conducted pilot interviews to determine how good my interview questions had been designed. By pilot testing, I not only gained practice in interviewing, but also quickly learned which questions were confusing and needed rewording, which questions yielded useless data, and which questions suggested by the respondents needed to be included in the interview process. After pilot testing, I reviewed my questions and reconstructed several of them accordingly.

To facilitate a better evaluation and comparison of the interview responses, I prepared a matrix that summarizes the major points to be determined by the interview questions. In this matrix, basic market analyses and financial feasibility studies necessary to reduce the risk and increase the possibility of a successful office development project were highlighted **(**see appendix A for the matrix**)**.

Data Analysis & Interpretation

Bogdan & Biklen (2003) define data analysis as the process of systematically searching and arranging the interview transcripts, field notes, and other materials that the researcher accumulates to enable him/her to produce findings. Furthermore, they argue that data interpretation refers to developing ideas about the research findings and relating them to the literature and to broader concerns and concepts. Analysis involves working with the data, organizing it, breaking it into manageable units, coding it, synthesizing it, and searching for patterns. Interpretation involves explaining and framing the ideas in relation to theory, other scholarship and action, as well as showing why the findings are important and making them understandable.

Following the face-to-face interviews, each interview was painstakingly transcribed (see Appendix H to obtain an English version of each company's interview summary responses). Transcription of the interviews was an extremely time-consuming process, taking approximately one-to-two weeks for each company. Once the transcription of all interviews was completed, three companies' interviews (Company E, Ak and Y) - out of thirteen - had to be eliminated because the data was inadequate to define the subject companies' decision-making models. Lack of responses to crucial questions, unrealistic and/or idealistic answers that conflict with known facts and/or a company's existing market situation and absence of company-specific information throughout the whole interview were some of the important facts that led to the exclusion of these companies from the study. After the transcription process, I began to analyze the interview transcripts inductively to obtain an initial feel for the content. I

mainly used the constant comparative method to analyze my data, since my primary research goal was to understand the conceptual links between and among the categories and develop a go/no-go decision-making model.

The constant comparative method of data analysis was developed by Glaser & Strauss (Merriam, 1998) as the means of developing grounded theory. This method involves comparing one segment of data with another to determine similarities and differences. As Merriam (1998) states, the basic strategy of the method is to do just what its name implies – constantly compare. The researcher begins with a particular incident – in this case, certain steps that decision-makers take while making a go/no-go decision– from an interview, field notes, or document, and compares it with another incident in the same set of data or in another set. These comparisons lead to tentative categories that are then compared to each other and to other instances. Comparisons are constantly made within and between levels of conceptualization until a theory, or a model –as it is the case here–, can be formulated. Glaser (Merriam, 1998) recounts the steps in the constant comparative method of developing theory as follows:

1. Begin collecting data.
2. Look for key issues, recurrent events, or activities in the data that become categories of focus.
3. Collect data that provide many incidents of the categories of focus, with an eye to seeing the diversity of the dimensions under the categories.
4. Write about the categories being explored, attempting to describe and account for all the incidents in the data while continually searching for new incidents.

5. Work with the data and emerging model to discover basic social processes and relationships.
6. Engage in sampling, coding and writing as the analysis focuses on the core categories.

Following a similar procedure, I first went through the transcripts and read them a number of times. While reading the transcripts, I also tried to highlight the information that I thought was potentially important for my inquiry. Then, I began coding the data using the semi-constructed questions I had directed to my interviewees. Since I was exploring particular problems and/or aspects of the decision-making process, I adopted the key terms that I had used in the semi-constructed questions as the pre-assigned coding system (Bogdan & Biklen, 2003) and continued to build onto this preexisting coding system as the analysis progressed (see Appendix G for pre-assigned coding system). This process took considerable time before I could exhaust all the data and segment it as several meaningful units of data. After coding the data, I tried to identify a number of major categories out of these codes that further developed into the major decision-making steps of the companies. Details of these decision-making steps can be seen in the findings and results chapter.

After the detailed analyses of the interview transcripts, I used the identified codes and categories to create each company's decision-making model. While studying each company's decision-making model, I constantly compared one decision-making process with another and tried to find the similarities and differences among these models. As described in detail in the findings and results section, three groups -named respectively

as Construction Co. Model, REIC Model, and Mixed Model- were emerged from these ten company interviews conducted.

Each group model was reported on a one-page summary sheet (see report to interviewees section for more detail). These summary sheets were e-mailed back to the associated interviewees, accompanied by a cover letter requesting feedback on the group model appropriate to their respective company to achieve a better and more realistic understanding of each company's decision-making model. To the companies that did not respond to the first e-mail, second and third follow-up e-mails were sent to encourage them to review the grouped decision-making models of their companies to better represent reality (see reliability, validity and researcher bias section for more detail regarding the use of member checking).

In the third stage, corrected and finalized versions of company decision-making models were analyzed. As mentioned earlier in the study design section, a matrix was prepared ahead of time to show the basic studies and analyses necessary to reduce the risk and increase the possibility of a successful office development project **(**see appendix A for the matrix**)**. After filling out the matrix for each company according to the interview transcripts, companies were evaluated both individually and against each other according to the completeness and thoroughness of the procedures followed during the pre-development stage. Results were then compared with the obtained occupancy and/or vacancy rates and payback periods of the office development projects undertaken by these companies. With the use of the constant comparative analysis method, any

disparities within each model leading to high vacancy rates and long payback periods were identified.

In the fourth and last stage, additions and/or deletions were suggested for each company's decision-making model to enhance the decision-making process of each company in the pre-development stage of office development. The previously studied decision-making models - Wurtzebach & Miles Model, Canestaro Model and Graaskamp & Sharkawy Model - and the literature review were used as a guide.

Report to Interviewees

As Taylor & Bogdan (1984) suggest, the following issues were addressed at the outset of every interview: The investigator's motives and the inquiry's purpose, the protection of respondents through the use of pseudonyms, deciding who has the final say concerning the study's content, payment (if any), and logistics with regard to time, place, and number of interviews to be scheduled.

In the findings and results section of this study, both the individual company results and a comparative analysis among all company applications – with the common and unique disparities and practices undertaken by these firms – were reported. However, to protect confidentiality when reporting the results back to the interviewees, each company was provided with only their own evaluation results combined with the necessary additions and/or deletions recommended for their specific decision-making models. In line with the confidentially issues, interviewees' responses were coded. No identifiers linking them to the study were included in the dissertation or any other report (see appendices C and D for the information sheet and IRB approval).

Reliability, Validity & Researcher Biases

Like Alan Peshkin (1993), I also believe that no research paradigm has a monopoly on quality. None can deliver promising outcomes with certainty. None have the grounds for saying, “this is it” about their design, procedures, and anticipated outcomes. I agree with the ideas that have been stated by Donald Warwick and Claire Selltiz, where the former view that every method of data collection is only an approximation to knowledge (Peshkin, 1993). Each provides a different, and usually valid, glimpse of reality, and all are limited when used alone. The latter makes an observation that social research is a continuing search for truth in which tentative answers lead to a refinement of the questions to which they apply (Peshkin, 1993).

As a result, it is true that when used separately, qualitative and quantitative studies provide different types of information. However, as also stated by Firestone (1987) when focused on the same issue, qualitative and quantitative studies can triangulate – that is, use of different methods can improve the robustness or stability of findings. By triangulating the methods used in a study, a researcher finds the opportunity to obtain different types of information about the social phenomena studied, which can actually provide more and better evidence to construct meaningful propositions about the social world. In this case, the value of triangulation will lie in providing evidence – whether convergent, inconsistent or contradictory – such that the researcher can enrich her/his understanding of the social phenomena (Mathison, 1988). Also as noted by Morse (Onwuegbuzie, 2002), researchers who claim to purport to philosophical underpinnings of only one research paradigm should not lose the sight of the fact that

research methodologies are merely tools at our disposal for facilitating understanding of phenomena.

Unfortunately, due to the non-existent knowledge base in my subject area, I will not be able to triangulate *my research methodologies* in this study. However, I do not believe that this will lead to reliability or validity problems in my research. As Bogdan and Biklen (2003) also highlight, in qualitative studies, researchers are concerned with the accuracy and comprehensiveness of their data. Qualitative researchers tend to view reliability as a fit between what they record as data and what actually occurs in the setting under study, rather than the literal consistency across different observations. Consecutively, two researchers studying a single setting may produce different data and conclude different findings. Both studies can be reliable. One would only question the reliability of one or both studies if they yielded contradictory or incompatible results.

According to Merriam (1998), reliability – the extent to which there is consistency in the findings – is enhanced by the investigator explaining the assumptions and theory underlying the study, by triangulating the data and by leaving an audit trail. That is, by describing in detail how the study was conducted and how the findings were derived from the data. On the other hand, the question of internal validity – the extent to which research findings are congruent with reality – is addressed by using triangulation, checking interpretations with individuals interviewed or observed, staying on-site over a period of time, asking peers to comment on emerging findings, involving participants in all phases of the research, and clarifying research biases and assumptions. Finally, the extent to which the findings of a qualitative study can be generalized to other situations –

external validity – continues to be the object of much debate. Working hypotheses, concrete universals, naturalistic generalization, and user or reader generalizability are discussed as alternatives to the statistical notion of external validity by Merriam (1998).

To deal with reliability and validity in my data collection and analysis, I chose to triangulate *my sources of data* by differentiating the type of companies conducting office development. These include REICs and construction companies. I applied *interviewee checks* by sending back interview results for correction (see data collection section) and clarification of any possible *researcher biases*. I stated what they might have been and what kind of precautions should have been taken to prevent them to confirm the emerging findings. By doing so, I hope to strengthen the reliability of my research as well as the internal and external validity of my inquiry.

As Merriam (1998) states in a qualitative study, the researcher is the primary instrument for gathering and analyzing data and, as such, can respond to the situation by maximizing opportunities for collecting and producing meaningful information. Conversely, the researcher as human instrument is also limited by being human – that is, mistakes are made, opportunities are missed, and personal biases may interfere with data collection and analysis. Human instruments are as fallible as any other research instrument. Consequently, the interviewer-respondent interaction often becomes a complex phenomenon. Both parties bring biases, predispositions, attitudes, and physical characteristics that may influence interaction during interviews. In turn, this may even lead us to distorted or exaggerated information. Such distortion should be detected by checking the plausibility of the account and the reliability of the informant. In addition,

interviewing requires creating enough distance to enable the researcher to ask real questions and to explore, not to share, assumptions.

As an important tool of this research, I, the researcher, might have brought the following biases to my research: Learning the real estate development jargon from an American institution could have been a bias for me, since I might have been inclined to listen to my Turkish interviewees within this context, possibly leading to misinterpretations. I have addressed this possible bias by asking the meaning of any terminology informants used to confirm that we were talking about the same thing. I also provided the interviewees with the questions and a list of technical terminology that I had compiled before the initial interview.

Also, being away from Turkey for more than four years might have led me to biases related to changes that might have taken place during my absence. To address this type of bias, I again tried to ask additional questions during the interviews for clarification.

CHAPTER IV

RESULTS AND FINDINGS

The purpose of this chapter is to report the analyses and findings of this study. A brief review of the similarities and differences among ten subject companies interviewed (see Appendix H for individual interview summaries) are discussed first. Also presented are the three groups that were emerged while analyzing the decision-making approaches. These three groups are: Construction Co. Group, Mixed Group and REIC Group, respectively.

Next, each group is described in greater detail to provide a better understanding of these similarities and differences. Facts are then reviewed for each particular company belonging to one of these groups. Afterward, the interview responses of each group are summarized accompanied by tables intended to facilitate a comparison. Once distinctions among these groups are clarified, a further description relating to how each group differentiates its decision-making approach is conducted, followed by a visual model of the decision-making process.

Table 8 presents a coded list of the ten companies included in this study. Each company has developed at least one Class A office building in a region that was previously discussed as problematic in the Istanbul office market (see Chapter II for more detail). Five of these ten companies are Real Estate Investment Companies (REIC) that also represent the complete REIC population, as there are currently only five REICs in Istanbul that include office buildings in their portfolio. The other five companies

interviewed are construction companies that perform both general contracting and real estate development.

Table 8
Companies Included in the Study

#	Type	Company	Function	Objective	Approach
1	Construction Co.	Company K	Developer / Investor / Contractor	Land in search of use	Hold or Sell
2		Company U	Developer / Investor / Contractor	Land in search of use	Unit-by-unit sale
3		Company G	Developer / Investor / Contractor	Land in search of use	Unit-by-unit sale
4		Company M	Developer / Investor / Contractor	Land in search of use	Hold or Sell
5		Company T	Developer / Investor / Contractor	Land in search of use	Hold or Sell
6	REIC	Company Ih	Developer / Investor – (Contractor)	Land in search of use	Unit-by-unit sale
7		Company A	Developer / Investor – (Contractor)	Land in search of use	Unit-by-unit sale
8		Company N	Developer / Investor – (Contractor)	Land in search of use	Unit-by-unit sale
9		Company I	Developer / Investor	Investor in search of a profit opportunity	Hold or Sell
10		Company YK	Developer / Investor	Investor in search of a profit opportunity	Hold or Sell

As listed in table 8, Companies K, U, G, M and T are construction companies acting as developers, investors and contractors of potential office projects. The interview process revealed that, because of the highly competitive construction market, most of the major construction companies enter into the real estate market as well to create new project opportunities for their core businesses.

All of the construction companies indicated that they initially look for “land in search of a use” to start an office project. Land is scarce in Istanbul, making it the most important resource and the primary factor in the profitability of a project. No consensus exists regarding the development goal / approach among companies. Two construction companies prefer “unit-by-unit sale” of office buildings, as their goal is to sell the

project as soon as possible. Others choose to hold or sell the building based on the project's financing and market conditions at the time of the development.

The remaining five companies, Company Ih, A, N, I, and YK, are real estate investment companies (REIC), which act primarily as developers and investors in prospective office projects. However, three of these REICs have sub-contractor companies that they delegate the work to. These are also the companies that generally look for "land in search of a use" and, similar to the construction companies, choose unit-by-unit sales as their development goal / approach. In contrast, two of the five REICs act primarily as investors in search of a profit opportunity. They try to hold the project in their portfolio unless financial necessities require otherwise.

These companies could be grouped as either construction or real estate investment companies. However, a closer look at the companies and their structures calls for an additional categorization which allows for a better understanding of the differences among each company's decision-making model in the upcoming sections.

Table 9
Companies and Their Company Structures

Construction Company		**REIC**	
Company U	Construction Co.	Company Ih	Construction Co. originated REIC
Company G	Construction Co.	Company A	Construction Co. originated REIC
Company K	REIC related Construction Co.	Company N	Construction Co. originated REIC
Company M	REIC related Construction Co.	Company I	REIC
Company T	REIC related Construction Co.	Company YK	REIC

Table 9 suggests a secondary grouping of the companies according to their company structures. As the table shows, just two companies from each group are exclusive in their company structures. The remaining three construction companies (Company K, M and T) are REIC-related companies, meaning they have a REIC either as a partner or a sub-company. Similarly, three of the REICs (Company Ih, A and N) are actually REICs that originated from construction companies. This means that they were founded as a general contracting / construction company, and currently have a partnering or a sub-contractor company within their overall company structure.

An analysis of the interview transcripts revealed that, to a certain degree, the differences emerged from the company decision-making procedures could be attributed to the structural differences of the companies as well. Table 10 is created to further refine and categorize these companies. Categories displayed in table 10 also denote the final categories that will expose the different decision-making models used by these ten companies in the following sections. These categories are therefore crucial in understanding the differences among groups.

Table 10
Final Grouping of the Companies

Construction Co.	**Mixed**	**REIC**
Company U	Company K	Company I
Company G	Company M	Company YK
	Company T	
	Company Ih	
	Company A	
	Company N	
Unit-by-unit sale	Sell (or Hold)	Hold (or Sell)

As shown in table 10, three categories determine the final grouping of the companies. The first category, “Construction Co.”, includes only firms that are exclusively construction companies, Company U and G respectively. Both of these companies try to sell the project unit-by-unit as quickly as possible and use the resulting profits to start another project. The second category, “REIC”, includes Company I and Company YK, which are exclusively real estate investment companies. Conversely, they prefer to hold their investments in their portfolio as long as they don’t experience any financial setbacks during project development. The third category is defined as “Mixed”, since it includes those companies that have a mixed-nature in their company structures. They are Companies K, M, T – from Construction group, and Companies Ih, A, N – from REIC group. The blending of REIC and Construction Company approaches into one company structure is intended to bring a unique perspective to the decision-making processes of the subject companies. As a result, they will be discussed separately from the other two groups.

Company Descriptions and Interview Findings

Construction Co. Group

As previously mentioned, the Construction Co. Group includes Company U and Company G. As seen in table 11, both of the companies are solely general contractors and have no partnering or parent companies involved in other business activities. They both have developed “four office buildings” in different parts of Istanbul, all of which were considered to be problem areas in the literature review chapter of this study. The perceived status of both companies in the market is “medium-quality”, as there are

"larger and more respected players" in the market. They both have "primarily developed commercial buildings". However, Company U also develops "retail and hotel projects", while Company G is more interested in "residential development".

Table 11
Quick Facts about the Construction Co. Group

Quick Facts	**Construction Co.**	
	C4 = U	**C11 = G**
Company Type	General Contractor	General Contractor
Partnering Company Type (if any)	None	None
Company Portfolio	Commercial, Retail, Hotel	Commercial, Residential
Number of Office Buildings Developed	4	4
Office Development Locations in Istanbul	Altunizade, Kozyatagi	Maslak
Market Analysis (**I**nhouse/**O**utsource/**B**oth)	B	I
Project Finance (**E**quity/**D**ebt/**B**oth)	E	B
Development Style (**L**and/**S**wap/**B**oth)	S	S
Perceived Status in the Market	Medium Quality	Medium Quality

Both companies entered into the real estate business "to generate constant cash flow to support their core activities through the lease or sale of developed projects", as well as "to make a profit". Neither of the companies has a formalized decision-making model. Neither company purchases land beforehand. Instead, they prefer to structure a "land-to-equity swap agreement"[9] with the landowner. This prevents them from "committing extensive resources to the project early in the process", thereby reducing "development risk" in the pre-development stage.

[9] Developer makes a contract with the landowner. In this contract landowner gives a certain percentage of shares to the developer, but with a mortgage placed on each share. As assured phases of the construction are completed, landowner dissolves certain amount of these mortgages on the shares. With this approach there is no initial capital investment on land. Capital investment occurs as the construction progresses.

Individuals involved in the pre-development stage of the office development projects for Company U and Company G are typically “the boss, shareholders / landowner(s) and project manager(s)”. Company U also believes in the “importance of including the architect” in the pre-development process.

Company G uses “in-house staff” to perform the market analysis, while Company U chooses to “outsource” this function to real estate consulting firms. However, once they receive the market reports from the consultants, they use in-house staff “to double-check the figures”. This is primarily because “real estate consulting firms are relatively new and have yet to gain much experience or respect in the market”. This explains why almost none of the companies rely exclusively on the consulting firms’ market analyses, even if they choose to outsource this segment.

Table 12 shows the interviewee responses of the Construction Co. Group on the previously prepared matrix (see Appendix A), where project feasibility analysis has been divided into two principal components, as previously discussed in the review of literature chapter. Market analysis has four major sub-components while financial feasibility analysis has eight. As displayed in the matrix presented in table 12, none of the companies feel the need to perform a thorough macroeconomic analysis, since “Istanbul is already identified as the major metropolitan city with favorable office indicators”. Both companies consider Istanbul as “a small real estate market”, and thus argue that “it is easy to keep track of the growth and development patterns of the market by just being in the business”.

Table 12
Construction Co. Group's Interview Response Matrix

PROJECT FEASIBILITY ANALYSIS	Construction Co.	
	C4 = U	C11 = G
MARKET ANALYSIS		
A) Macroeconomic Analysis	N	N
1. Economic base analysis	N	N
2. Population analysis	N	N
3. Income level analysis	N	N
4. Growth or development patterns	N	N
B) Local Market Analysis	Y	Y
1. Local Economic base analysis	Y	Y
2. Local Transportation flows	S	S
3. Immediate neighborhood competition	Y	Y
4. Potential for future competition	S	S
C) Site Selection / Site Specific Market Analysis	Y	Y
1. Site analysis	Y	Y
2. Demand analysis	Y	Y
3. Supply analysis	Y	Y
D) Marketability / Market Share Analysis	S	S
1. Analysis of competitive rents and operating expenses	Y	Y
2. First estimate of capture rate & absorption	S	S
3. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)	S	S
FINANCIAL FEASIBILITY ANALYSIS		
A. Project Cost Estimate	Y	Y
B. Discounted Cash Flow Analysis- normalized operations	Y	Y
C. Net present value and justified investment price	Y	Y
D. Yield or internal rate of return	S	S
E. Key Financial Ratio Analysis	S	S
1. Debt service coverage ratio	Y	S
2. Break-even occupancy ratio	S	S
3. Operating expense ratio	N	N
4. Cash-on-cash return ratio	N	N
5. Expected property value	Y	S
F. Capitalization rates	S	S
G. Payback period	7-8 years	8 years
H. Risk & sensitivity analysis	Y	S

N = No, Y = Yes, S = Somewhat (partially)

Both Company U and Company G perform the local market analysis, site selection and site-specific market analysis to a certain degree. However, some of the

sub-components in each analysis are only partially carried out. This is primarily because they both argue that there are “certain well-defined popular regions that attract specific business activities”. Thus, they do not believe that there is “a need to re-identify new sub-markets” that might have favorable office indicators. They already know that “there are none”.

None of the companies thoroughly perform a marketability and market share analysis, arguing that the “exact figures for rental rates and operating expenses are not publicly available for most office buildings”, thus forcing analysts “to make predictions using estimated figures”. “Ranges used by consulting companies are either on a broad scale, which limits their usability, or they are inaccurate because they do not include tenant improvements or behind-closed-door deals.”

The financial feasibility analysis component of the project feasibility analysis also suffers from a similar problem, as both companies believe that “the unstable economy cannot produce reliable and/or accurate information for financial calculations”. “Predictions are primarily based on the estimates, making the outcome rather unrealistic from the very beginning”. Thus, most calculations are done “just for the sake of doing them”. Some fairly standard financial ratios are not even calculated and/or used. Nevertheless, both of the companies feel rather confident about their “ability to accurately calculate the project cost and expected property value of their building”.

Company U typically uses company “equity” to finance its projects, while Company G uses both “company equity and short-term loans”. Company U also tries to develop the project in several phases so “the project can become self-financing after the

completion and sale of certain phases". They both consider "90–100 months (7-8 years)" as an acceptable payback period; however, they still prefer to include a certain risk margin (margin of error) in their analysis. Contrary to the national and international market reports currently available, Company U and G claim "5%" and "0%" vacancy rates respectively in their buildings.

REIC Group

As table 13 shows, the REIC group consists of Company I and Company YK, both of which are solely real estate investment companies. They both have "a financial institution as a partner" backing them fully once a go-decision is made on a development project. Having financial institutions as partners enables both companies to be "fairly flexible and self-determining" on their venture structuring of the projects. Although the real estate market lacks long-term financing, these companies do not encounter such financing problems. As a result, they can "commit extensive resources to a project in the pre-development stage by purchasing the land beforehand", assuming they believe "it is viable".

The reputation of both companies in the marketplace is perceived to be "top quality". Company I is mainly focused on developing "entertainment, hotel, office and retail projects", while Company YK is more inclined to develop "office and residential projects". Hitherto, Company I and Company YK have developed "three" and "four" office projects, respectively, both on the European side of Istanbul. Both companies prefer using "numerous independent consultant companies" in addition to their own in-

house market analyses to validate their findings. They both claim to have "a formalized decision-making model" that they use while making a go/no-go decision.

Table 13
Quick Facts about the REIC Group

Quick Facts	**REIC**	
	C6 = I	**C8 = YK**
Company Type	REIC	REIC
Partnering Company Type (if any)	Financial Institution	Financial Institution & General Contractor
Company Portfolio	Entertainment, Hotel, Office, Retail	Office, Residential
Number of Office Buildings Developed	3	2
Office Development Locations in Istanbul	Levent, Etiler, Zincirlikuyu	Levent
Market Analysis (**I**nhouse/**O**utsource/**B**oth)	B	B
Project Finance (**E**quity/**D**ebt/**B**oth)	E	E
Development Style (**L**and/**S**wap/**B**oth)	B	B
Perceived Status in the Market	Top Quality	Top Quality

Company I is focused on "creating a dynamic, sustainable, and professional property market in Turkey through a vehicle that offers investors the best returns at the lowest possible risk". In comparison, Company YK defines "profitability, creating value for its shareholders and an IRR that exceeds 15% - 16%" as its main goals and objectives when developing a real estate project. Major parties involved in the pre-development stage are "the project development team, the investment team, and the marketing team" for Company I; and "the project development team, the department managers, and the members of the board" for Company YK. Table 14 summarizes the interview responses of each company. As the matrix shows, both companies perform most of the analyses listed under the market analysis segment. They are "constantly in

search of investment opportunities" and, as a result "constantly carry out regional market analyses".

Both companies are particularly strong in marketability and market share analyses. They both value highly the importance of "integrating value creation concepts into projects", resulting in unique, marketable projects. Similarly, both Company I and Company YK perform most of the financial feasibility analyses listed.

Like all of the other companies being discussed, none of the companies experience a problem while estimating the project cost due to the presence of "well-established benchmarks". Both Company I and Company YK apply discounted cash flow analyses along with net present value, internal rate of return and capitalization rate calculations. They both employ most of the key financial ratios other than the operating expense ratio. The operating expense ratio is not considered to be a risk factor for the companies, as "it is included in the triple-net lease", and thus potential risk is transferred to the tenant. Furthermore, since none of the companies use long-term debt service to finance their projects, "calculating the debt service coverage ratio loses its meaning and significance" for most of the companies.

Similar to most companies performing in the market, Company YK considers "eight years" as an acceptable payback period for development projects. Company I even finds "ten years" to be "a satisfactory payback period as long as the projects carry low risk and long-term return potential". Both of the companies claimed that they had a "0% vacancy rate" in all of their developments at the time of their interviews. They also

both argued that they had “never experienced vacancy rates exceeding 10% - even during the crises period”.

Table 14
REIC Group’s Interview Response Matrix

PROJECT FEASIBILITY ANALYSIS	REIC	
	C6 = I	C8 = YK
MARKET ANALYSIS		
A) Macroeconomic Analysis	Y	Y
1. Economic base analysis	Y	Y
2. Population analysis	Y	Y
3. Income level analysis	Y	Y
4. Growth or development patterns	Y	Y
B) Local Market Analysis	Y	Y
1. Local Economic base analysis	Y	Y
2. Local Transportation flows	Y	Y
3. Immediate neighborhood competition	Y	Y
4. Potential for future competition	Y	Y
C) Site Selection / Site Specific Market Analysis	Y	Y
1. Site analysis	Y	Y
2. Demand analysis	Y	Y
3. Supply analysis	Y	Y
D) Marketability / Market Share Analysis	Y	Y
1. Analysis of competitive rents and operating expenses	Y	Y
2. First estimate of capture rate & absorption	Y	Y
3. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)	Y	Y
FINANCIAL FEASIBILITY ANALYSIS		
A. Project Cost Estimate	Y	Y
B. Discounted Cash Flow Analysis- normalized operations	Y	Y
C. Net present value and justified investment price	Y	Y
D. Yield or internal rate of return	Y	Y
E. Key Financial Ratio Analysis	Y	Y
1. Debt service coverage ratio	S	S
2. Break-even occupancy ratio	Y	S
3. Operating expense ratio	N	N
4. Cash-on-cash return ratio	Y	Y
5. Expected property value	Y	Y
F. Capitalization rates	Y	Y
G. Payback period	10 years	8 years
H. Risk & sensitivity analysis	Y	Y

N = No, Y = Yes, S = Somewhat (partially)

Mixed Group

As previously discussed, the mixed group includes two sub-groups. The first sub-group consists of Companies A, Ih and N. These are all construction-company-originated REICs, inferring that they were all "initially founded as general contractors and later transformed into REICs". These transformations were mostly conducted "to expand the business capabilities" and "improve their perceived status in the market"; since companies qualifying as REICs must prove that they perform under certain regulations (see Appendix F for more detail). This is becoming increasingly important, as this approach is believed "to help make the market much more transparent" in the long run. The second sub-group includes Companies K, M, and T. These are all REIC-related construction companies, indicating that they have a REIC either as a partner or a sub-company. Tables 15 and 16 present some quick facts about these companies.

Table 15
Quick Facts about the Mixed Group – I

Quick Facts	**Mixed Group (Construction Co. originated REIC)**		
	C1 = A	**C2 = Ih**	**C10 = N**
Company Type	REIC	REIC	REIC
Partnering Company Type (if any)	General Contractor	Financial Institution & General Contractor	General Contractor
Company Portfolio	Office, Residential	Office, Residential	Office, Residential, Infrastructure
Number of Office Buildings Developed	8	1	1
Office Development Locations in Istanbul	Maslak, Karakoy, Sishane	Uskudar	Maslak
Market Analysis (**I**nhouse/**O**utsource/**B**oth)	I	O	O
Project Finance (**E**quity/**D**ebt/**B**oth)	E	B	E
Development Style (**L**and/**S**wap/**B**oth)	S	S	L
Perceived Status in the Market	Top Quality	High Quality	High Quality

As displayed in tables 15 and 16, all companies in the mixed group have “office and residential development projects” in their portfolio. Most of the companies prefer developing in the European side of Istanbul. Only Company Ih prefers the Asian side. Among these six companies, Company K has the most extensive office development record with “15 projects”. Companies A and M follow with “eight” and “seven” projects, respectively. Each of the remaining three companies had only “one office development” in the Istanbul market at the time this research was conducted.

Table 16
Quick Facts about the Mixed Group – II

Quick Facts	**Mixed Group (REIC related Construction Co.)**		
	C9 = K	**C3 = M**	**C5 = T**
Company Type	General Contractor	General Contractor	General Contractor
Partnering Company Type (if any)	Financial Institution	Textile Co.	Financial Institution & General Contractor
Company Portfolio	Office, Residential, Shopping Center	Office, Residential, Retail, Tourism	Office, Residential
Number of Office Buildings Developed	15	7	1
Office Development Locations in Istanbul	Levent, Maslak, Sisli-Mecidiyekoy	Mecidiyekoy, Levent, Etiler	Levent
Market Analysis (**I**nhouse/**O**utsource/**B**oth)	B	I	O
Project Finance (**E**quity/**D**ebt/**B**oth)	E	E	B
Development Style (**L**and/**S**wap/**B**oth)	B	S	B
Perceived Status in the Market	Top Quality	Top Quality	High Quality

In line with their development records, the perceived reputations of companies K, M, and A in the market are “top-quality”; whereas companies Ih, N and T are known as “high-quality” companies. Company A, Company Ih and Company M typically prefer “land-to-equity swap agreements”, whereas Company N favors the “purchase of land”.

Table 17
Mixed Group's Interview Response Matrix – I

PROJECT FEASIBILITY ANALYSIS	Mixed - I		
	C1 = A	C2 = Ih	C10 = N
MARKET ANALYSIS			
A) Macroeconomic Analysis	S	S	S
1. Economic base analysis	N	N	Y
2. Population analysis	N	Y	N
3. Income level analysis	Y	N	N
4. Growth or development patterns	Y	Y	Y
B) Local Market Analysis	Y	Y	Y
1. Local Economic base analysis	Y	Y	Y
2. Local Transportation flows	Y	Y	Y
3. Immediate neighborhood competition	Y	Y	Y
4. Potential for future competition	Y	S	S
C) Site Selection / Site Specific Market Analysis	Y	Y	Y
1. Site analysis	Y	Y	Y
2. Demand analysis	Y	Y	Y
3. Supply analysis	Y	Y	Y
D) Marketability / Market Share Analysis	Y	S	S
1. Analysis of competitive rents and operating expenses	Y	Y	Y
2. First estimate of capture rate & absorption	Y	Y	Y
3. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)	Y	S	S
FINANCIAL FEASIBILITY ANALYSIS			
A. Project Cost Estimate	Y	Y	Y
B. Discounted Cash Flow Analysis- normalized operations	Y	Y	Y
C. Net present value and justified investment price	Y	Y	Y
D. Yield or internal rate of return	Y	Y	Y
E. Key Financial Ratio Analysis	Y	S	Y
1. Debt service coverage ratio	Y	Y	S
2. Break-even occupancy ratio	Y	Y	Y
3. Operating expense ratio	Y	N	Y
4. Cash-on-cash return ratio	N	N	Y
5. Expected property value	Y	Y	Y
F. Capitalization rates	Y	Y	Y
G. Payback period	6-7 years	2.5 years	10-15 years
H. Risk & sensitivity analysis	Y	Y	Y

N = No, Y = Yes, S = Somewhat (partially)

Table 18
Mixed Group's Interview Response Matrix – II

PROJECT FEASIBILITY ANALYSIS	Mixed - II		
	C9 = K	C3 = M	C5 = T
MARKET ANALYSIS			
A) Macroeconomic Analysis	Y	S	S
1. Economic base analysis	Y	Y	Y
2. Population analysis	N	N	Y
3. Income level analysis	Y	Y	N
4. Growth or development patterns	Y	N	N
B) Local Market Analysis	Y	Y	Y
1. Local Economic base analysis	Y	Y	Y
2. Local Transportation flows	Y	Y	Y
3. Immediate neighborhood competition	Y	Y	Y
4. Potential for future competition	Y	S	S
C) Site Selection / Site Specific Market Analysis	Y	Y	Y
1. Site analysis	Y	Y	Y
2. Demand analysis	Y	Y	Y
3. Supply analysis	Y	Y	Y
D) Marketability / Market Share Analysis	Y	Y	Y
1. Analysis of competitive rents and operating expenses	Y	Y	Y
2. First estimate of capture rate & absorption	Y	Y	Y
3. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)	Y	Y	Y
FINANCIAL FEASIBILITY ANALYSIS			
A. Project Cost Estimate	Y	Y	Y
B. Discounted Cash Flow Analysis- normalized operations	Y	Y	Y
C. Net present value and justified investment price	Y	Y	Y
D. Yield or internal rate of return	Y	Y	Y
E. Key Financial Ratio Analysis	Y	S	S
1. Debt service coverage ratio	S	N	Y
2. Break-even occupancy ratio	Y	Y	Y
3. Operating expense ratio	Y	N	N
4. Cash-on-cash return ratio	Y	Y	Y
5. Expected property value	Y	Y	Y
F. Capitalization rates	Y	N	N
G. Payback period	6-7 years	10-16 years	10 years
H. Risk & sensitivity analysis	Y	Y	Y

N = No, Y = Yes, S = Somewhat (partially)

Company K and Company T are inclined to go either way, "depending on the project and/or the proposed venture structure". Company A and Company M are inclined

to use their own “in-house staff” exclusively when conducting market analyses. Conversely, Companies Ih, N and T typically prefer to “outsource” their market analyses to independent consulting firms. Company K chooses to use both means to confirm their findings. Tables 17 and 18 illustrate the interview responses from each company in matrix form. As can be seen from these tables, the nature of company responses supports the decision to treat these companies as one group.

Except for Company K, all companies in the mixed group perform macroeconomic analysis to some degree, omitting at least two of four major categories throughout the process. Typically, the argument supporting their decision is “lack of need to carry out detailed analysis on any market other than Istanbul”, as it is by far the largest. Within the Istanbul market, companies generally express the relative “ease of following the market because of its manageable size”.

All of the companies in the mixed group argue that they perform local market analysis. However, when it comes to the potential for future competition, four out of six companies appear to be more confident and choose not to execute a very detailed analysis, usually claiming that “there are not many competing companies of their caliber, making the effort rather useless”. Site selection and site-specific market analysis is executed by all of the companies to the fullest degree, as “location and site characteristics” are regarded as “the most crucial factors for a project’s success”. Marketability and market share analysis are carried out by most of the companies in the mixed group, except Company Ih and Company N, who typically “do not refine the capture rate to account for competitive advantages and disadvantages”. Due to “well-

established benchmarks", none of the companies experience any problems when calculating the expected project cost. All of the companies perform discounted cash flow, risk and sensitivity analyses. They also calculate net present value, internal rate of return, and a capitalization rate.

Since Company A and Company Ih prefer to "sell their projects unit-by-unit once they are completed", they typically do not calculate a cash-on-cash return ratio for the projects. Company M does not include the debt service coverage ratio in its calculations, as the company uses "equity" exclusively to finance its projects. Likewise, companies N and K do not always include a debt service coverage ratio in their calculations for similar reasons. The operating expense ratio is typically not calculated by those companies that prefer to hold office developments in their portfolio, as these companies use triple-net leases and thus "do not consider this ratio as a risk factor for the company".

Acceptable payback periods for mixed-group companies range from 2.5 years to 16 years, depending on the typical company preference to sell (shorter payback period) or to hold (longer payback period) the projects. All companies in the mixed group primarily use "equity" to finance their projects.

Table 19 summarizes the collective group interview responses. For each analysis, unless all the companies are in agreement to perform (Y) or not perform (N) a certain analysis, the overall group decision is recorded as somewhat / partially performed (S). This approach allows making the distinction between a unanimous and a divided approach within the companies among the emerged groups, which also makes it easier to understand the extent of improvement available for each decision-making model.

Table 19
Collective Group Interview Responses

PROJECT FEASIBILITY ANALYSIS	Construction Co. Group	Mixed Group	REIC Group
MARKET ANALYSIS			
A) Macroeconomic Analysis	N	S	Y
1. Economic base analysis	N	S	Y
2. Population analysis	N	S	Y
3. Income level analysis	N	S	Y
4. Growth or development patterns	N	S	Y
B) Local Market Analysis	Y	Y	Y
1. Local Economic base analysis	Y	Y	Y
2. Local Transportation flows	S	Y	Y
3. Immediate neighborhood competition	Y	Y	Y
4. Potential for future competition	S	S	Y
C) Site Selection / Site Specific Market Analysis	Y	Y	Y
1. Site analysis	Y	Y	Y
2. Demand analysis	Y	Y	Y
3. Supply analysis	Y	Y	Y
D) Marketability / Market Share Analysis	S	S	Y
1. Analysis of competitive rents and operating expenses	Y	Y	Y
2. First estimate of capture rate & absorption	S	Y	Y
3. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)	S	S	Y
FINANCIAL FEASIBILITY ANALYSIS			
A. Project Cost Estimate	Y	Y	Y
B. Discounted Cash Flow Analysis- normalized operations	Y	Y	Y
C. Net present value and justified investment price	Y	Y	Y
D. Yield or internal rate of return	S	Y	Y
E. Key Financial Ratio Analysis	S	S	Y
1. Debt service coverage ratio	S	S	S
2. Break-even occupancy ratio	S	Y	Y
3. Operating expense ratio	N	S	N
4. Cash-on-cash return ratio	N	S	Y
5. Expected property value	Y	Y	Y
F. Capitalization rates	S	S	Y
G. Payback period	8 years	8.5 years	9 years
H. Risk & sensitivity analysis	Y	Y	Y

N = No, Y = Yes, S = Somewhat (partially)

In summary, the following are considered to be the basic differences among the three groups: Construction Co. group, Mixed group and REIC group (Table 19).

1. Only REIC group acts as an investor in search of a profit opportunity, while the other two are constantly looking for land in search of a use.
2. The swap agreement is exclusively used by the Construction Co. group.
3. Equity is the major means of project financing for all three groups.
4. Macroeconomic analysis is not performed by the Construction Co. group, only partially performed by the mixed group and fully performed by the REIC group.
5. Local market analysis is performed by all groups. However, the degree of importance varies among and within Construction Co. and Mixed groups, resulting in a lack of attention to detail at times.
6. Site selection / site specific market analysis is performed by all groups to the fullest extent.
7. Marketability / market share analysis is only fully executed by the REIC group.
8. Project cost estimates, discounted cash flow analysis, NPV, IRR, risk and sensitivity analyses are all properly calculated, in theory, by each of the companies.
9. Use and understanding of key financial ratios significantly varies among the groups.
10. Acceptable payback periods are somewhat similar among groups.

Company Decision-Making Models

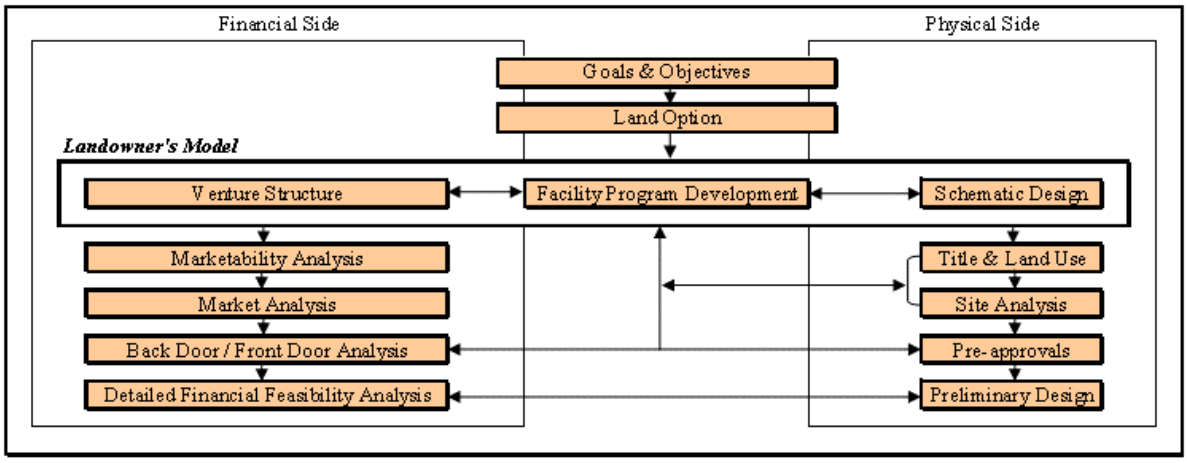
As the collective interview responses have shown, three different approaches are implemented by the ten companies conducting business in the Turkish real estate market. The following sections elaborate on the different approaches and identify the steps being used by each group. Models developed in this section have all been approved by the interviewees via follow-up emails, and the parties have acknowledged that the models

represent the actual processes. To better communicate the basic steps taken throughout the processes, the diagrams are simplified. Specific go/no-go decision points, where the decision to proceed, modify or drop the idea is made, are not shown at the end of each single analysis performed.

Construction Company Model

The Construction Company group's decision-making process starts with defining the goals and objectives of the company (Figure 8). These companies are always in search of land, and options are typically brought to these companies by real estate agents and/or landowners themselves.

Figure 8
Construction Co. Group's Model



Once a landowner brings a project to a construction company group, she/he generally has a preliminary idea about what to do with the site, including a possible venture structure, facility program and schematic design. At that point, the company first checks to determine whether this preliminary idea is something that fits with their own

company objectives, and, if applicable, how the idea could be enhanced to increase the feasibility and profit for both parties. Another crucial point at this stage is the proposed venture structure under the “land-to-equity” swap agreement, which generally involves how to share the end-product. Typical practice among the construction company group type involves splitting the actual building on a certain percentage basis once the development is completed. Previously, the acceptable percentage ratios have been a 50% – 50% split. However, the recent economic crises have turned this ratio into an unrealistic one for the development companies, forcing them to require higher percentages for their shares. Unequal ratios in these agreements are beginning to cause some tension between companies and the landowners who had become accustomed to the 50% – 50% ratio.

If the landowner’s initial idea is found to be promising by the boss, project feasibility analysis starts on the physical side by checking the title / land use and the site. Any problems encountered at this level are considered to be deal-breakers, and no further analyses are performed. Meanwhile, a quick marketability analysis is performed on the financial side to check whether the proposed idea can actually generate a satisfactory return. If the results are satisfactory, analyses on both the financial and physical side proceed as shown in figure 8. On the physical side, a detailed site analysis is carried out with the purpose of obtaining pre-approvals as soon as possible. In the meantime, a more detailed market analysis is performed on the financial side to double-check the viability of the project. While the analyses are verified by back door / front door analyses, an attempt is made to secure pre-approvals. If the results on both sides are

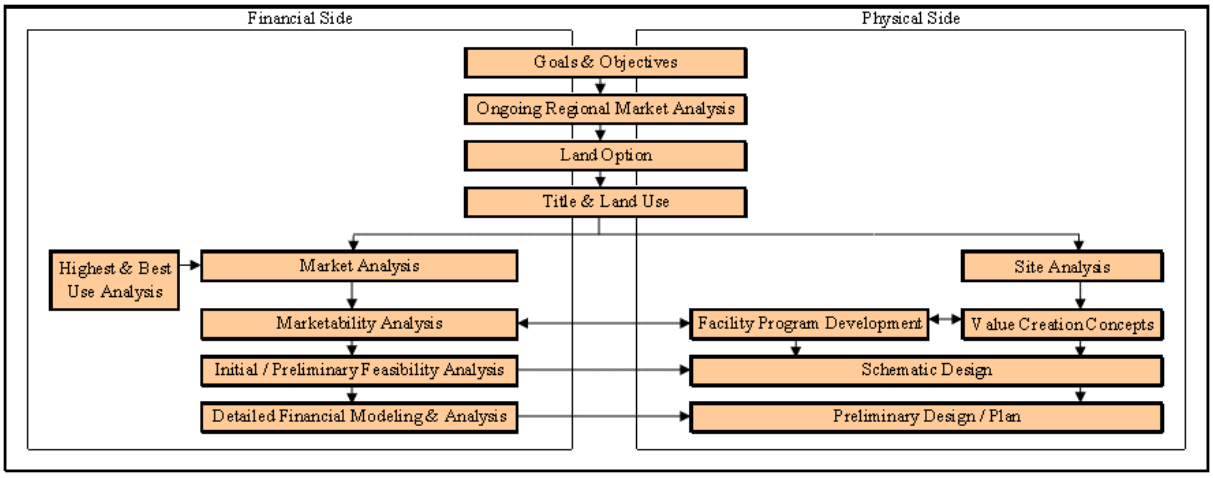
still satisfactory, a more detailed financial feasibility analysis on the financial side, and a preliminary design on the physical side are performed. If the analyses do not produce acceptable results, the idea goes back to the drawing board and changes are attempted on any or all segments of the landowner's model to make the idea more viable and consistent with the findings of the previously performed analyses.

REIC Model

The REIC Group's model also starts with establishing the goals and objectives of the company (Figure 9). REIC group-type companies are constantly in search of an investment opportunity; therefore, regional market analysis is carried out regularly. Once the company discovers a land option that is in line with its goals and objectives, it first checks the title and land use of the option. Any problem encountered at this stage might be considered as a reason to drop the idea.

Assuming there are no problems with the title and land use, the company's in-house team begins evaluating the idea from both the financial and physical sides. On the financial side, a market analysis is executed. In the meantime, the company requests several highest and best use analyses from various independent consulting firms that will be examined in conjunction with the outcomes of the in-house market analysis. On the physical side, a site analysis is carried out.

Figure 9
REIC Group's Model



If the results of these analyses look promising, then the marketability analysis on the financial side and facility program development, along with the determination of the value creation concepts on the physical side, are performed. The decisions made in these stages are typically collaborative and thus impact each other. If the team still finds the outcomes of these stages satisfactory, then a back door / front door analysis on the financial side is performed to confirm the expected outcomes of the development.

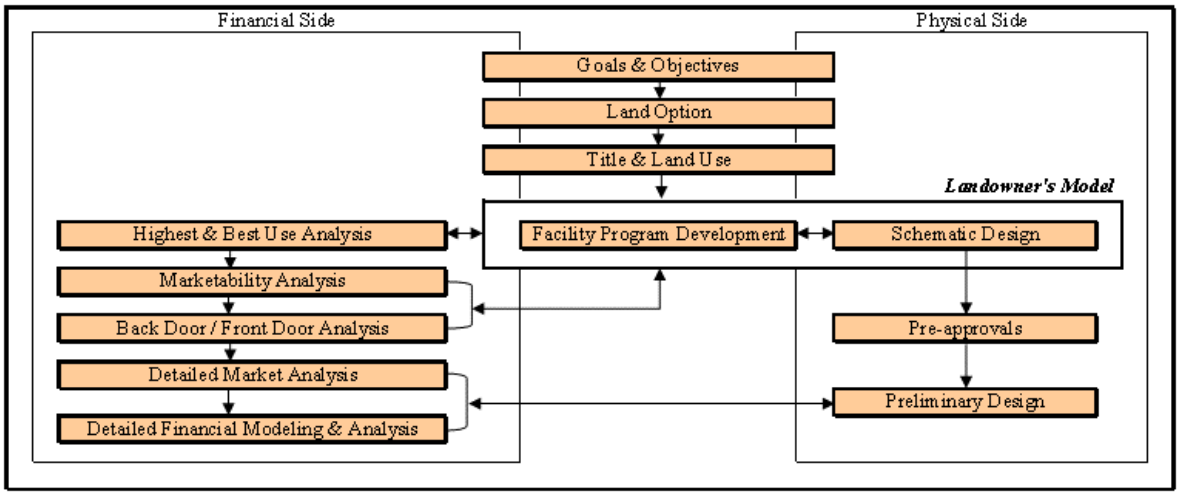
Meanwhile, on the physical side, the schematic design of the project is being initiated. Again, any decision made on either side of the process impacts the other side and must be taken into account. Only if the results of all the previous stages are suitable can the project development team move to the final stage. At this stage, detailed financial modeling and analysis is executed on the financial side while preliminary designs/plans are prepared on the physical side. If the project development team should encounter any problem at any stage, the idea returns to the drawing board until it is

satisfactory for all participants and receives a unanimous go decision free from any opposition or concerns.

Mixed Model

As seen in figure 10, similar to the other two groups, the mixed group's model starts with determining the goals and objectives of the company. As land availability is the most crucial issue in the Istanbul market, the companies in this group are constantly in search of land as well. However, they do not use in-house staff to look for potential sites. Instead they wait for real estate agents and/or landowners to bring options to them. When a land option surfaces, the mixed group-type of company first checks the title and land use of the site from the municipalities. If a problem is discovered, no further action is taken regarding that site.

Figure 10
Mixed Group's Model



However, if the inquiry produces an affirmative result, discussions about the landowner's model begin. Typically, a landowner approaches a mixed group-type of company with an already generated facility program and a schematic design of an idea. With mixed group companies, the venture structure is more flexible. If the company likes the location of the site, it may either try to buy the land or make a deal with the landowner. If the landowner wants to offer the land in exchange for equity, commonly referred to as swap agreement, the company may choose to either split the end-product physically, or share the profit once the development is completed. Recently, more companies prefer profit sharing than splitting the actual building.

While working on the formation of the venture structure, the company requires that several highest and best use analyses be conducted by a variety of independent real estate consultants. After a consensus is reached on both what to do and how to do it, a marketability analysis is performed, followed by a back door / front door analysis to confirm the findings. If the outcomes of the analyses are satisfactory, the company executes a more detailed market analysis on the financial side and attempts to secure pre-approvals on the physical side. If not, the idea goes back to the drawing board. Changes, where applicable, are suggested to the landowner based on the findings of these analyses.

Detailed market analysis is followed by detailed financial modeling and analysis. Results of these analyses are used when determining the preliminary design of the idea on the physical side. At this stage, any decision made on either side, financial or physical, will impact on the other side, necessitating confirmation from both sides.

Comparison among the Turkish Company Models

As figures 8, 9, and 10 illustrate, various similarities and differences exist among the three groups (Construction Company Group, Mixed Group and REIC group) in their go/no-go decision-making procedures. The most obvious similarity is the mutual emphasis put on the site, as land is the scarcest resource in the Istanbul market. Another similarity involves treating any type of problem encountered in the title and land use level as an instant deal-breaker. The legal system is extremely slow and therefore, most companies try to avoid engaging in any legal process. Economic instability and lack of long-term financing instruments are crucial motives for companies trying to remain debt-free throughout the development process. Otherwise, the risk of rapid currency fluctuations can be overwhelming.

Considering the volatility of the market, and in an effort to reduce development risk, most companies try to avoid committing extensive resources to an idea in the pre-development stage. Thus, they prefer to conduct swap agreements with the landowners. Recently, the standard arrangement among parties began to shift from splitting the actual physical building to sharing the profit. This proved to be a better way to increase both profits and occupancy rates by preventing the parties to the agreement from being competitors once the building is complete.

Gut-feeling plays a crucial role while making the final go-decision among all groups. Except the REIC Group, the boss of the company is almost always the last one to make the final decision, regardless of the other interested parties' opinions. Family-run companies are more common among the Construction Company and Mixed Groups.

All groups usually create and rely on their own company database, as in the Turkish market there is no reliable and/or publicly available data. Consulting companies that claim to produce such data are yet to mature and gain respect in the market.

As seen in the tables, the level of standardization and professionalism improves as the companies get more involved and focused on real estate development as their sole practice. Figures 8, 9, and 10 suggest that the Construction Company group acts more like a controller than a developer on the project, as the model is mostly developed around the landowner and does not leave much room for flexibility on the Construction Company group side. Although ideas are refined as necessary, the projects in general lack the creativity that might differentiate the product from others. The basic philosophy behind the model is “quality sells”.

On the other hand, the REIC group maintains control of the project at all times and does not tolerate much interference, even from the landowners. Maintaining the control of the building by holding on to the project also helps the REIC Group to preserve the value of the building by preventing it from becoming obsolete. They are much more flexible in their venture structure, and try to differentiate their products from others by using a number of value creation concepts. Efficiency (rental area per the construction area) and quality of the design is taken more seriously by the REIC group. They follow not only the local market but also the macro market and look at real state developments as long-term investment opportunities rather than short-term, quick-return investments. They are transparent in all transactions, often incurring higher costs than

others when conducting business in the market. They perform under strict rules and regulations, pushing the market toward a more professional environment.

It is speculated that in the Istanbul real estate market, up to 50% of all market transactions are not being recorded. Several laws and regulations have been proposed by the Association of Real Estate Investment Companies (GYODER), in an effort to eliminate unrecorded transactions, thus avoiding unfair competition. The lack of strict regulations for all parties conducting business in the real estate market and easy accessibility to the industry are blamed for facilitating the idle market. This is largely caused by individuals (the “one-timers”) who inherit land, develop it and wait until they receive their asking price, no matter how long it may take. Money-laundering practices are also a result of lax regulation. These also seem to be the only plausible explanation for a few rare cases when vacancy rates nearing 100% are experienced by brand new office developments. All groups consider an improvement in the institutional structure as the solution to most of these problems.

The Mixed group model can be considered the transformation phase between the Construction Company group model and the REIC group model. Some companies within the Mixed group maintain the idea that quality sells, while others begin to feel the need to differentiate their product, and thus embrace a newer idea: marketability as a key to success. All three groups complain about non-existent standards and benchmarks, unregulated urban / master planning and title and land use applications, and their impact on the analyses. Some even argue that they are performing some analyses merely for the

sake of doing it, as things often change extremely fast and thus there is no way of making sound predictions by using already-estimated data.

In summary, a true understanding of how the real estate market works seem to be lowest with the Construction Company group and highest with the REIC group, which also suggests room for improvement in the Istanbul real estate market. It can be argued that this is already happening at a slow but certain pace.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

In this chapter, an overview of the research is summarized followed by the conclusions derived from the findings of this study. In the summary section, purpose of the study, research questions guiding the study, research design and methodology are briefly restated. A brief evaluation of the previously studied models (Wurtzebach & Miles Model, Canestaro Model and Sharkawy & Graaskamp Model) and a summary comparison of these models, where the strengths and weaknesses of each model are discussed, are presented to better facilitate the upcoming suggestions section on how to improve the Turkish go/no-go decision-making models. This section is followed by a comparison of these US models and the Turkish company decision-making models introduced in the findings and results chapter. Next, suggestions are made about each Turkish decision-making model, based on the literature review and research findings. Finally, the strengths and weaknesses of the study and recommendations for further study are discussed.

Summary

Purpose of the Study

This study's purpose is to explore and identify the disparities of the decision-making models currently used by Turkish real estate development companies at the pre-development stage of office development projects and to recommend necessary additions and/or deletions to enhance these company models.

Research Questions

The research questions (R.Q.) guiding this study are:

R.Q. 1- ***How do*** Turkish real estate professionals ***make a go/no-go decision*** in the pre-development stage of office development projects?

R.Q. 2- ***Which analyses are applied*** in the pre-development stage in order to assess the economic viability of the office development projects?

R.Q. 3- ***Are the procedures*** currently being followed to make office development decisions in the pre-development stage ***different***?

R.Q. 4- If so, ***what are the disparities*** of these procedures undertaken in the pre-development stage of office development projects?

R.Q. 5- ***What kind of additions, deletions, or improvements could be suggested*** to increase the effectiveness of these applied analyses / used procedures?

Research Design and Methodology

Since there are no generally accepted rules throughout the profession in Istanbul, Turkey as a result of the non-existent theory base, the logical sequence that people have typically formed individually was sought by using their previous professional experiences and descriptions of their unique way of doing business, or in other words by the use of an inductive research strategy. With the use of qualitative research, the steps senior level managers go through when making a go/no-go decision for the development of office projects were analyzed. Face-to-face interviews were conducted with five

REICs and five construction companies that have developed at least one Class A office building in Istanbul, Turkey.

Findings & Results

Detailed analyses of the interview transcripts -along with the identified codes and categories used to create each company's decision-making model (answering the R.Q.1- How a go decision is made?), and the matrix prepared to show the analyses used (answering the R.Q.2- What analyses are used?)- revealed that there are three different types of go/no-go decision-making procedures, named respectively as Construction Co. Model, REIC Model, and Mixed Model, being used by the ten companies interviewed.

Comparisons among the previously studied models and the Turkish models (see next section for detail) were used to uncover the similarities and differences among groups (answering the R.Q.3- Are the procedures different?). With the aid of the constant comparative analysis method, any disparities within each model were identified (answering the R.Q.4- What are the disparities?). Subsequently, as discussed in the conclusions section of this chapter, additions and/or deletions were suggested for each company's decision-making model to enhance the decision-making process of each company in the pre-development stage of office development (answering the R.Q.5- How can the deficiencies be corrected?).

Comparison of the Previously Studied US Models

The purpose of this section is to give a brief demonstration of the previously studied decision-making models: Wurtzebach & Miles Model, Canestaro Model and Graaskamp & Sharkawy Model. First the specifications of the models are illustrated

under a similar structure; including the idea inception, idea refinement, feasibility, contract negotiations and commitment stages. Next, the key specifications of each model are pointed out. Finally, these three models are compared to one another, and the strengths and weaknesses of each model are identified. The comparison of these models is used as an aid in the comparative analysis, and the enhancement of the Turkish company models are revealed in the following section.

Model 1: The Real Property Development Model by Wurtzebach & Miles

The real property development model by Wurtzebach & Miles has eight stages, with the first five leading to the separate go / no-go decision points throughout the real estate development process. These first five go/no-go decision points and which stages they fall under are illustrated in table 20.

Most important tasks undertaken at each stage of the process are as follows, respectively (Wurtzebach & Miles, 1994; Miles, Haney & Berens, 1996):

- The testing of the new idea with a “back-of-the-envelope pro forma” –a simple comparison of value to cost, very early in the process,
- Finding and acquiring a site and making an initial determination of physical feasibility,
- Producing a sound market analysis, which is used to create value that would exceed all the projected costs of development,
- Controlling risk via contracts by setting forth the rules for the physical, financial, marketing, and operating activities that will occur during construction, formal opening, and operation,

- Executing the contracts at which point most of the players have no longer retain the option to walk out of the deal without substantial losses.

Table 20
Go/No-Go Decision Points in Wurtzebach & Miles Model

Stages	Pre-Development Stage		Document Development Stage		Product Development Stage			
	Idea Inception	Idea Refinement	Feasibility	Contract Negotiations	Commitment point	Construction	Initiation of Operations	Asset Management
Activities	an idea for a particular type of project	search for a specific location within the given market area	formal feasibility - precommitment stage	written agreements with all the key participants in the project	contracts are signed			
	type of tenants who might be interested in the projected space	site must be checked to see that zoning is appropriate or that appropriate zoning is possible	market research - market prospects for the chosen product	permanent loan commitment	partnership or joint-venture agreement is closed			
	possible sources of financing	there must be access to appropriate transportation arteries, and required municipal services must be available	preliminary drawings	construction loan commitment	construction loan closed			
		"tie up" the site; arrange for an option on the land or possibly a low downpayment purchase with no personal liability		preleasing to major tenants	permanent loan commitment fee is paid, binding the permanent lender			
		physical feasibility & architectural layout		a decision on financing the equity	construction contract is signed with the general contractor			
		potential permanent and construction lenders and general contractors will be approached to ascertain their general interest in providing loans			any presigned major tenants execute their leases			
Go/No-Go Decision		*GO*	*GO*	*GO*	*GO*	*GO*		
	"Cost-and-Income Pro Forma" estimated value and estimated cost comparison ???	The developer's idea has taken on location and a physical form, and has been tested for physical, legal and financial feasibility ???	Overall viability: Does the project value exceeds cost ???	Are the contracts arranged to implement the decision to proceed with the project ???	Are the contracts executed ???			
	STOP	*STOP*	*STOP*	*STOP*	*STOP*			

Model 2: Refine: Two Computer Simulation Model by Canestaro

This model primarily focuses on feasibility analysis, which provides decision assurance by evaluating market forces, understanding developer / investor motivations, and measuring the value, profit and risk implications of any real estate decision. The activities undertaken at each stage are demonstrated in table 21. Most important issues regarding the model are (Canestaro, 1989):

- Works best when there are established standards and benchmarks of the comparable projects that can be integrated into the calculations as the verified data,

- Merchandizing research uses data collected about comparable projects to determine the effective consumer demand for a specific site, with a particular set of space and amenity features,
- Three basic rules for measuring project feasibility, all evaluated in the context of time are:
  - The value of benefits generated by a project must exceed the capital investment,
  - The annual benefits must generate profits in excess of the investors' desired rate of return,
- There must be a minimal difference between the anticipated project risk performance and the results of the feasibility analysis.

Table 21
Go/No-Go Decision Points in the Canestaro Model

Stages		Pre-Development Stage		Document Development Stage		Product Dev. Stage		
Activities		Idea Inception	Idea Refinement	Feasibility	Contract Negotiation	Commitment Point	Construction Activity	Marketing & Leasing
market segmentation								
merchandizing research								
market research								
benefit cost analysis								
value tests	property residual value > initial project cost							
	before-tax total investment value > property residual value							
	before-tax equity investment value > initial equity contribution							
	after-tax total investment value > before-tax total investment value							
	after-tax equity investment value > total equity contribution							
	before-tax net present value > 0							
	benefit-cost ratio > 1							
profit tests	annual productivity index > anticipated market cap rate							
	before-tax cash rate of return > average mortgage interest rate							
	after-tax cash rate of return > average mortgage interest rate							
	before-tax internal rate of return > effective mortgage interest rate							
	after-tax modified internal rate of return > after-tax equity discount							
risk tests	operating expense / outgoings ratio not > comparable properties							
	default ratio < 1.0 minus the vacancy rate							
	average breakeven rent < average net effective rental rate							
	creative financing effective mortgage interest rate < amortized mortgage interest rate							
	debt coverage ratio > 1							
	before-tax equity payback achieved before target year							
	before-tax net worth > initial equity contribution							
	do actual percentage contributions to internal rate of return from before-tax benefits match predetermined targets?							
	after-tax equity payback achieved before target year							
	after-tax net worth > total equity contribution							
	do actual percentage contributions to modified internal rate of return from after-tax benefits match predetermined targets?							
	GO							
	STOP							

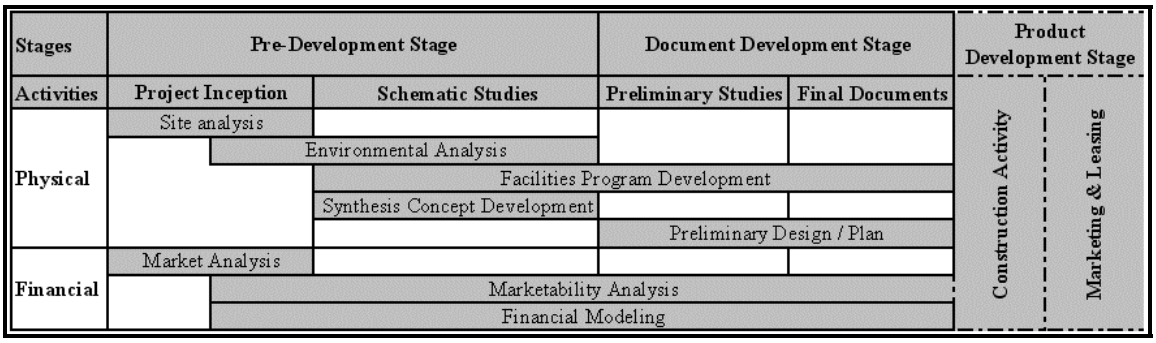
Model 3: Revised Multidisciplinary Development Planning Model (RMDPM) by Sharkawy & Graaskamp

The RMDP model starts with identifying the strategic objectives and priorities of the production group to narrow down tactical alternatives. Table 22 illustrates the activities taken at each stage. Following are the most important issues related with this model (Sharkawy, 1994; Sharkawy, 1975):

- The *financial side* of the model involves three processes: market analysis, marketability analysis, and financial modeling,
    - The deductive inference-centered segment of the model is structured to first define market trends in the aggregate, then to narrow down opportunity areas through market segmentation,
    - Consumer profiles and merchandising targets are identified,
    - The model also projects operating budgets and revenue sources, evaluates direct cash profit expectations, and pinpoints indirect profit centers and returns,
- The physical side of the model involves five inductive reasoning-based processes: site analysis, environmental analysis, the development's facilities program, a framework of value creation concepts for design, schematic design plans and preliminary design plans,
    - By recognizing the environmental aspects, the model capitalizes on the opportunities offered by the site's biota and abiota, and avoids the limitations imposed by the natural environment,

- Facilities program development involves identifying the project's basic components based on product mix and merchandising cycles, selecting amenities based on use cycles and participation rates, and providing the related service components.

Table 22
Go/No-Go Decision Points in Sharkawy & Graaskamp Model



Strengths & Weaknesses of the US Models

An examination of tables 20, 21, and 22 respectively reveals that each model actually tries to enhance one or two specific stages of the actual go/no-go decision process. The first model, Wurtzebach & Miles Model, mostly deals with the idea refinement and contract negotiation stages and gives the utmost importance to the preparation of these contracts as a way of controlling the high risk involved in the pre-development stage (Table 20).

The second model, Canestaro Model, puts the emphasis squarely on the feasibility stage (Table 21). This model primarily focuses on the financial benchmarks; value, profit and risk analyses and their calculations. The main goal in using this model

is to minimize the difference between expectations and realizations. Thus, each calculation should be repeated as more reliable information is gathered throughout the process.

The third model, Sharkawy & Graaskamp Model, is the first model to actually recognize both the physical and financial side of the development process separately (Table 22). Although the process is divided into two components, required studies are recommended to be handled in connection with each other since both aspects influence each other and cannot be analyzed independently from each other.

Besides their strengths, each model has also its own weaknesses. The Wurtzebach & Miles model lacks a detailed feasibility analysis in both the physical and financial side of the process. The Canestaro model is totally oblivious to the physical analysis of the process and the Sharkawy & Graaskamp model is deficient in benchmarks for the physical aspect of the process.

Nevertheless, although each model has its own strengths and weaknesses, it is obvious that the models are compatible with one another as well. If merged appropriately, improvements will strengthen the model that is being implemented and will make it more deficient-free. This kind of fitting combination should also make the model a better aid for the go / no-go decision analysis in the real estate development. In addition, as previously discussed, any model should also be modified for the unique environment it will be used in due to the certain unique characteristics that a particular market may possess. The following comparisons and recommendations are such an effort for the decision-making models used in the Turkish real estate market.

Comparison among the US & Turkish Models

Even though each US model emphasizes different stages of the process, all three models consider the following issues as top-priority for the success of the project and a sound go-decision at the pre-development stage:

- Acquisition of a site that enables the developer to avoid limitations imposed, and to capitalize on opportunities offered by, the natural environment,
- A sound market and financial feasibility analysis,
- Marketability of the project,
- Inclusion of the later phase activities (construction, operations and asset management) into the initial idea generation and idea refinement processes,
- Complete and explicit detailing of the project (transparency),
- Standardized and publicly available benchmarks,
- Reliable and institutionalized consultant services,
- Development of a well-balanced facilities program with a good product mix,
- Integration of value creation concepts and product differentials,
- Creation of indirect profit centers,
- Selection of amenities based on use cycles and participation rates.

On the other hand, when examining the decision-making models currently used in the Turkish real estate market, the following are the most common qualities of the office development process at the pre-development stage in Istanbul, Turkey:

- Securing land options rather than acquiring the site,

- Conducting swap agreements with the landowners (who are mostly non-real estate professionals),
- Use of equity for financing the project,
- Building up a company-generated database,
- Reliance on the market analysis conducted by the in-house staff,
- Consideration of "quality" as the major factor for renting/selling the space,
- Non-use of operating-expense and debt service coverage ratios.

When the Turkish decision-making models are individually compared with the US models, it is evident that the issues considered as top-priority are quite similar to the US models, as the true understanding of how the real estate market works improves among the Turkish groups. Since the understanding of the market is the highest for the REIC group, it is also the group that is closest to the US models. Conversely, Construction Company model is the farthest away from the US models. Following are some of the issues that are ***not*** considered as important for the success of the project, which also makes the distinction between the US models rather clear:

- Preserving the control of the building,
- Differentiating the product,
- Marketing,
- Attention to the efficiency and functionality of the design/product,
- Keeping the project in the portfolio,
- Integration of the later phases into the pre-development stage,
- Transparency throughout the whole process.

Conclusions: Suggestions on How to Enhance the Turkish Models Based on the Previously Reviewed Literature and the Findings and Results of the Research

The first step in making certain suggestions on how to improve the company decision-making models currently being used in the Turkish real estate market is understanding the limitations of the market in general. In an effort to shed a realistic and objective light on the problems that exist in the current market, the companies that were interviewed for this study expressed the following issues as the most obvious and crucial problems of the Turkish real estate market in general:

- Economic instability,
- Lack of long-term financing,
- High inflation and interest rates,
- Slow and lax legal process,
- Lack of transparency in the transactions,
- Non-existent standards and benchmarks,
- Unrecorded market,
- Not yet fully established consultant services,
- Inconsistent urban / master planning and zoning practices,
- Incoherent ownership laws / regulations.

In addition, from an outsider's viewpoint, Guy Pfeffermann, director, Global Business School Network for the International Finance Corporation[10] highlights the following issues as what foreign investors seek in a real estate market (Forum Istanbul,

[10] International Finance Corporation is a member organization of the World Bank Group, which promotes private sector investment in developing and transition countries.

2004): Access to markets, competitive production costs, stable low-risk political/ economic environment, few or no limits on ownership rights, clear laws and regulations, and pro-FDI (foreign direct investment) laws, institutions, and public opinion. He argues that issues like market size, geographical location, skilled labor force, low costs, quality of local business, and the European Union trade agreement also attract companies to Turkey. However, similar to the findings of the study, he argues that companies do not like political instability, inflation, difficulty in obtaining financing, lack of promotion and image, legislation, enforcement of the laws, and bureaucracy, tax administration, slow pace of privatization, high number of family-run businesses, and a thin capital market often evident in the Turkish market.

Table 23
Issues that Require Attention

Problem Areas / Issues		REIC	Mixed	Construction Co.
Market Boundaries / Limitations	Economic instability	Y	Y	Y
	High inflation and interest rates	Y	Y	Y
	Lack of long-term financing	N	Y	Y
	Slow and lax legal process	Y	Y	Y
	Unrecorded market	Y	Y	Y
	Incoherent ownership laws / regulations	Y	Y	Y
	Lack of transparency in the transactions	Y	Y	Y
	Inconsistent urban / master planning & zoning practices	Y	Y	Y
	Inexperienced consultants	Y	Y	Y
	Non-existent standards and benchmarks	Y	Y	Y
	Swap agreements with the landowners that have no real estate knowledge / background	Y	Y	Y
Company Limitations	Lack of interdependency in the venture structure & idea generation	N	S	Y
	Not considering the "marketability" of the product	N	S	Y
	Not differentiating the product	N	S	Y
	Not preserving the control of the building	N	S	Y
	Lack of long-term consideration & inclusion of the later phases into the design	N	S	Y
	Lack of attention to the efficiency & functionality of the design	N	S	Y

N: Not an issue; S: Still an issue, but improving; Yes, definitely an issue

The following suggestions and recommendations regarding how to enhance the Turkish group models are made within these limitations of the Turkish real estate market. Some of the limitations can be argued as unique characteristics of the market, while others are the temporary existing conditions of the market that will change in the future as the market matures. The issues that require higher attention by each group model are suggested in table 23, and explained in greater detail in the following sections.

Suggestions on How to Enhance the REIC Group's Model

Among the three models currently being used in the Turkish real estate market, REIC Group's model is the closest to the US models. The few variances occur as a result of the unique characteristics of the market. Some of these variances are expected to change along with the maturation of the market. The companies in this group like to challenge the current market boundaries, and are expected to act as the driving force in the transition process of the market to a more professional and standardized structure in line with the global real estate trends. At the end of this projected transition, previously listed problems like an unrecorded market, lack of long-term financing, inconsistent urban/master planning and zoning practices, incoherent ownership laws / regulations, lack of transparency in the transactions, non-existent benchmarks/standards and demand for professionalism from all related parties are expected to improve immensely. By being transparent throughout the whole process, REIC Group-type of companies will eventually be able to compete in a fair market where no costs are hidden.

Although REIC group's model is the most promising among others, they are limited within the boundaries of the market they conduct their business in. Thus, any

enhancement to this model is hampered by improvements to the general market. They still have to interact with mostly non-real estate professionals as landowners and include them in the widely-used swap agreements. However, they practice profit sharing rather than building-splitting to lower the risk. Even though they attempt to reduce risk by seeking professional consulting services, consultants in the market are largely inexperienced and produce low-grade, imitative reports. Because of the current lax system, companies in this group will not pursue any idea if they encounter even the smallest problem at the title and land use stage. In addition, because of inconsistent urban planning and zoning practices, they struggle with their long-term strategic planning. Non-transparent transactions in the market make it harder for the REICs to compete, as they almost always have the highest cost per project. Thus, to overcome such burdens, REICs partner with financial institutions. Any improvements in such market limitations can help companies utilize their resources more efficiently and effectively, which is believed to eventually help the market grow stronger as well.

Suggestions on How to Enhance the Mixed Group's Model

The Mixed Group model is the middle-ground approach to the decision-making process in the Turkish real estate market. The model possesses certain qualities from each side: Construction Company Group and REIC Group. The model accepts the influence of a non-real estate related landowner to some degree throughout the process. Thus, there is a certain interdependency in the venture structure and idea generation process. Marketability, inclusion of later phases into the planning process, attention to the efficiency and functionality of the design, preserving the control of the building, and

transparency in the transactions are some of the issues that require a higher degree of attention. Although the Mixed Group companies are better in dealing with these issues than the Construction Company Group, there is still room for improvement. Swap agreement practices, where the building is physically split between the landowner and the developer, are generally considered to be a less attractive solution than profit sharing. However, this type of practice is still applicable if demanded by the landowner. Nevertheless, this can increase the previously discussed problems drastically.

Suggestions on How to Enhance the Construction Company Group's Model

The Construction Company Group's model is the least similar approach to the US models. The companies included in this group perform within the market boundaries without challenging any of the limitations. They are market-driven in their approaches. Unless the landowner, who is the key decision-maker in the process, demands otherwise, they work around the landowner's preset project idea in determining the viability of the project. Most of the discrepancies observed in this model are a result of the strong influence the landowner has on the predevelopment stage of the project without necessarily being equipped with a relevant real estate/construction background. Problems include preserving the control of the building, differentiating the product, marketing the product, lack of attention to the efficiency and functionality of the design, long-term consideration and inclusion of the later phases into the design and transparency in the transactions. These problems should improve once the leverage of the landowner at the pre-development stage is reduced and replaced by a standardized approach that capitalizes on the physically and financially important real estate issues.

The detachment of the landowner from the process should effectively diminish the negative impacts of having a non-real estate professional acting as one, if not the most, decisive of the key decision-makers. Swap agreements, where the building is physically split between the landowner and the developer, are the most problematic practice in the market. Yet, they are also the most commonly exercised in the Construction Company Group. Believing solely in "quality" as the major factor for renting/selling the space, the parties involved consider that whatever is built can be rented/sold eventually, regardless of the actual marketability of the product. This understanding leads to unrealistic expectations and/or overconfidence concerning what market share the project might actually capture in addition to the idle market such a misconception creates.

Recommendations for Further Study

As previously suggested, evaluation and enhancement of these current models are believed to improve the future office development decisions of the primary decision-makers by helping them make better-informed go / no-go decisions at the pre-development stage. In line with previously expressed foreign investor expectations, it is also a strong belief that a more transparent, consistent and procedural way of doing business in the Turkish office development market may convince and encourage international investors and developers to invest more in the Turkish real estate market. Use of international standards and practices might increase the confidence level of foreign investors and developers while decreasing the perceived risk of doing business in the Turkish real estate market.

Yet, although the problems concerning the Turkish company decision-making models and recommendations on how to improve these models are directed in this study, there are no real attempts made, other than pinpointing the related concerns, to recommend solutions to the Turkish real estate market problems in general. Without an enhancement of these general market conditions, individual improvements in the company decision-making models will still be handicapped to a certain degree.

REFERENCES

Altunisik, M. B. and O. Tur, *Turkey: Challenges of Continuity and Change*, London: RoutledgeCurzon, 2005.

Arnold, L. E., *Commercial - investment Real Estate: Marketing and Management*, Book one, Chicago, Illinois: Realtors National Marketing Institute, 1983.

Barrett, G. V. and J. P. Blair, *How to Conduct and Analyze Real Estate Market and Feasibility Studies,* 2nd ed., New York: Van Nostrand Reinhold, 1988.

Bogdan, R. C., and S. K. Biklen, *Qualitative Research for Education: An Introduction to Theory and Methods*, 4th ed., Boston: Allyn and Bacon, 2003.

Canestaro, J. C., *Refining Project Feasibility*, 3rd ed., Blacksburg, Virginia: The Refine Group, Inc., 1989.

CIA, *The World Factbook*, http://www.cia.gov/cia/publications/factbook/geos/tu.html, 2005.

Colliers International, *Global Office Real Estate Highlights*, http://www.colliershotels.com/prod/ccgrd.nsf/publish/8BD74BEF9CFC45EA8625707E004B212D/$File/Global+Highlights+Midyear+2003.pdf, 2003.

Colliers Resco, *Real Estate Review – Turkey*, http://www.colliers.com/Content/Repositories/Base/Markets/Istanbul/English/Market_Report/PDFs/REal_Estate_Review_2003_-_Turkey.pdf, 2003.

Cushman & Wakefield - Healey & Baker, *Emerging Europe Summary*, http://www.spillerfarmer.hr/pdf/CWHB-emergingEU.pdf, 2003.

Etter, W. E., *Financial Feasibility Analysis*, College Station, Texas: Real Estate Center, 1988.

Etter, W. E., *Investment by Design: A Primer in Real Estate Analysis*, College Station, Texas: Real Estate Center, 1995.

Firestone, W., Meaning in Method: The Rhetoric of Quantitative and Qualitative Research, *Educational Researcher*, 1987, 16:7, 16-21.

Ford, D. A., *Fundamentals of Real Estate Investment for Decision Makers*, Minneapolis: West Pub. Co., 1994.

Freeman, L. M., *A New Approach to the Feasibility Analysis of Commercial Property Investments*, Doctoral Dissertation, University of Canterbury, Christchurch, New Zealand, 1987.

Gause, J. A. and W. P. O`Mara, *Office Development Handbook*, 2nd ed., Washington, D.C.: ULI – The Urban Land Institute, 1998.

Graaskamp, J. A., A Guide to Feasibility Analysis: Update, 1991b. In S. P. Jarchow (Ed.), *Graaskamp on Real Estate*, Washington, D.C.: Urban Land Institute, 102-123.

Graaskamp, J. A., Fundamentals of Real Estate Development, 1991a. In S. P. Jarchow (Ed.), *Graaskamp on Real Estate*, Washington D.C.: Urban Land Institute, 228-265.

Graaskamp, J. A., Identification and Delineation of Real Estate Market Research, 1996. In J. M. Stein (Ed.), *Classic Readings in Real Estate and Development*, Washington, D.C.: Urban Land Institute, 184-193.

Graaskamp, J. A., The Role of Investment Real Estate in Portfolio Management, 1991c. In S. P. Jarchow (Ed.), *Graaskamp on Real Estate*, Washington, D.C.: Urban Land Institute, 310-363.

Greer, G. E., *Investment Analysis for Real Estate Decisions*, 4th ed., Chicago, Illinois: Dearborn Financial Publishing, Inc, 1997.

Greer, G. E., *The Real Estate Investment Decision*, Lexington, Massachusetts: Health and Company, 1979.

Jaffe, A. J. and C. F. Sirmans, *Real Estate Investment Decision-making.* Englewood Cliffs, New Jersey: Prentice Hall, 1982.

Krueger, O. A., *Turkey's Economy: A Future Full of Promise, Forum Istanbul*, May 5, Istanbul, Turkey, http://www.imf.org/external/np/speeches/2005/050505.htm, 2005.

Kuzey Bati Gayrimenkul Hizmetleri, *Istanbul Anatolian Side, Kozyatagi-Altunizade-Kavacik Districts, Class A Office Market Report*, http://www.kuzeybati.com/yayinlar.asp, 2003.

Lizieri, C. and A. Baum, *Real Estate Education in Europe* (A report for Urban Land Institute), Whiteknights, Reading, UK: The University of Reading, School of Business, Department of Land Management and Development, 2002.

Mathison, S., Why triangulate? *Educational Researcher*, 1988, 17:2, 13-17.

Merriam, S. B., *Qualitative Research and Case Study Applications in Education*, San Francisco: Jossey-Bass, 1998.

Miles, M. E., Haney, R. L. and G. Berens, *Real Estate Development: Principles and Process*, 2nd ed., Washington, D.C.: Urban Land Institute, 1994.

NAIPega Commercial Real Estate Services Worldwide, *Turkish Economy in Brief*, http://www.naidirect.com/publications/NAI_pega_turkey/mr2003.pdf, 2002.

OECD, *Policy Brief: Economic Survey of Turkey*, http://www.oecd.org/dataoecd/42/47/33821199.pdf, 2004.

Onder, Z., Chapter 21: Turkey, 2002. In K. W. Schulte (Vol. Ed.), *Real Estate Education Throughout the World: Past, Present and Future*, Norwell, Massachusetts: Kluwer Academic Publishers, 287-297.

Onwuegbuzie, A. J., Why can't We All Get Along? Towards a Framework for Unifying Research Paradigms, *Education*, 2002, 122:3, 518-530.

Patton, M., Qualitative Interviewing, Ch. 7, *Qualitative Evaluation and Research Methods*, 2nd ed., Thousand Oaks, California: Sage, 1990.

Peiser, R. B. & D. Schwanke, *Professional Real Estate Development*, Washington, D.C.: Urban Land Institute, 1992.

Peshkin, A., The Goodness of Qualitative Research, *Educational Researcher*, 1993, 22:2, 23-29.

Pfefferman, G., *Is Turkey Getting Its Fair Share of Foreign Direct Investment?* Istanbul, Turkey: Forum Istanbul, 2004.

Saft, S. M., *Real Estate Development: Strategies for Changing Markets*, New York: John Wiley & Sons, 1990.

Sharkawy, A. M., *Economic Programmatic Ecologic Analysis for Planning/Design in Land Development*, Unpublished Doctoral Dissertation, University of Wisconsin, Madison, 1975.

Sharkawy, A. M., Physi-Fi: A Physical-Financial Model for Design Economy Trade-Offs, 1994. In J. R. DeLisle & J. Sa-Aadu (Vol. Eds.), *Appraisal, Market Analysis, and Public Policy in Real Estate*, Vol.1, *Essays in honor of James A. Graaskamp*, Norwell, Massachusetts, Kluwer Academic Publishers, 203-235.

Smith, J. and L. Heshusius, Closing Down the Conversation: The End of the Quantitative-Qualitative Debate Among Educational Inquirers, *Educational Researcher,* 1986, 15:1, 4-12.

Taylor, S. J., and R. Bogdan, Introduction to Qualitative Research Methods, 1984. In S. B. Merriam, *Qualitative Research and Case Study Applications in Education*, San Francisco, Jossey-Bass, 1998.

TDA, *Making Connections with Eurasia Project Resource Guide*, U.S. Trade and Development Agency (TDA), http://www.bisnis.doc.gov/TDABrussels_files/TurkeyProfile.pdf, 1999.

U.S. Department of State, *Background Note: Turkey*, Bureau of European and Eurasian Affairs, http://www.state.gov/r/pa/ei/bgn/3432.htm, 2005.

Wurtzebach, C. H. and M. E. Miles, *Modern Real Estate*, 5th ed., New York: John Wiley & Sons, 1994.

Zuckerman, H. A. and G. D. Blevins, *Real Estate Development Workbook and Manual*, Englewood Cliffs, New Jersey: Prentice Hall, 1991.

APPENDIX A

MATRIX

Table A-1
Matrix For Interviewees' Use

PROJECT FEASIBILITY ANALYSIS	Interviewee Response
MARKET ANALYSIS	
1. Economic base analysis	
2. Population analysis	
3. Income level analysis	
4. Growth or development patterns	
5. Local Economic base analysis	
6. Local Transportation flows	
7. Immediate neighborhood competition	
8. Potential for future competition	
9. Site analysis	
10. Demand analysis	
11. Supply analysis	
12. Analysis of competitive rents and operating expenses	
13. First estimate of capture rate & absorption	
14. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)	
FINANCIAL FEASIBILITY ANALYSIS	
1. Project Cost Estimate	
2. Discounted Cash Flow Analysis- normalized operations	
3. Net present value and justified investment price	
4. Yield or internal rate of return	
5. Key Financial Ratio Analysis	
- Debt service coverage ratio	
- Break-even occupancy ratio	
- Operating expense ratio	
- Cash-on-cash return ratio	
- Expected property value	
6. Capitalization rates	
7. Payback period	
8. Risk & sensitivity analysis	
SUPPLEMENTARY QUESTIONS	
1. Market analysis (inside / outsourced)	
2. Project finance (loan, equity distribution)	
3. People involved in the pre-development stage	

Table A-2
Matrix For Researcher's Use

PROJECT FEASIBILITY ANALYSIS	COMPANIES				
	C1	C2	C3	C…	C10
MARKET ANALYSIS					
A. Macroeconomic Analysis					
1. Economic base analysis - Major industries - Shift-share analysis (industry mix & competition)					
2. Population analysis - Population - Households					
3. Income level analysis - Median household income - Office employment					
4. Growth or development patterns - Office-using sectors - Office inventory - Annual construction - Net annual office absorption - Vacancy rate (by Class A / B / C) - Typical lease rate (by Class A / B / C) - Typical price for land (by CBD/suburban CBD)					
B. Local Market Analysis					
1. Local Economic base analysis - Major industries - Type of space major industries require - Development & market trends - Market segmentation					
2. Local Transportation flows - Street and road patterns in the area - Traffic counts and pattern - Commute times from residential areas - Proximity to mass transit - Physical barriers to access - Psychological or perceptual barriers to access					
3. Immediate neighborhood competition - The location of competitive buildings - Total office space inventory - Competitive buildings' share of total market - Occupancy - Net absorption - Rental rates (by Class type & tenant size) - Vacant or available space - Vacancy rate					
4. Potential for future competition - The availability of empty sites for future competitors - The potential of constructed sites for renovation, adaptive reuse, and complete redevelopment for future competitors - Rezoning potential					

C. Site Selection Study / Site Specific Market Analysis					
1. Site analysis - Local zoning and building codes - Utilities - Transportation linkages & traffic - Parking - Size & shape - Location - Soil conditions & topography - Environmental issues and impact study					
2. Demand analysis - Growth in office-using jobs - Local employment patterns (by industry & types of jobs) - Identification of potential tenants & consumer profiles - Potential market niches needing space (by tenant type) - Determination of services & amenities sought					
3. Supply analysis - Existing office space - Likely future additions - Net absorption trends - Vacancy rate trends - Style, size & amenities - Lease rate trends & terms - Ownership - Tenant types - Type & quality of building systems - Construction cost trends and available financing					
D. Marketability / Market-Share Analysis					
1. Analysis of competitive rents and operating expenses					
2. First estimate of capture rate & absorption					
3. Refinement of capture rate to account for competitive advantages & disadvantages (standards / differentials)					
FINANCIAL FEASIBILITY ANALYSIS					
1. Project Cost Estimate					
- Development costs (hard, soft, land)					
- Operating costs					
- Borrowing costs					
2. Discounted Cash Flow Analysis- normalized operations					
- Gross possible rents					
- Vacancy & collection loss					
- Operating expenses					
- Annual operating income					
- Debt service					
- Depreciation					
- Tax liability					
3. Net present value and justified investment price					
4. Yield or internal rate of return					

5. Key Financial Ratio Analysis					
- Debt service coverage ratio					
- Break-even occupancy ratio					
- Operating expense ratio					
- Cash-on-cash return ratio					
- Expected property value					
6. Capitalization rates					
7. Payback period					
8. Risk & sensitivity analysis					
SUPPLEMENTARY QUESTIONS					
1. Market analysis (inside / outsourced)					
2. Project finance (loan, equity distribution)					
3. People involved in the pre-development stage					

* Sections that are written in *italic* will be the basis of the interview questions, and selected detail level. However, segments above and underneath the plain italic sections are included as reminders of what each section is about and will be used as supplementary data if required by the interviewees to better understand the questions. This matrix is not prepared for the interviewees themselves and will not be filled out by them. It will be filled out by the researcher only. Thus, it is significantly more detailed and comprehensive than the one presented in Appendix I-b.

Objective of each major components of Project Feasibility Analysis

Macroeconomic Analysis: To identify metropolitan areas or cities with favorable office indicators, for further analysis.

Local Market Analysis: To identify sub-markets with favorable office indicators, for further analysis.

Site-selection Study: To select a site among those identified as favoring office development.

Site-specific Market Analysis: To identify metropolitan areas or cities with favorable office indicators, for further analysis.

Marketability Analysis: To determine the achievable rents and occupancy as well as marketable design and amenity features for an office project at the subject site(s).

Financial Feasibility Analysis: To determine if the investor can earn the required rate of return, given achievable market rents, cost of capital, debt service requirements, and operating expenses.

APPENDIX B

INTERVIEW QUESTIONS

1. How do you or your company define specific goals and objectives while developing a real estate project?
2. Do you have a formalized decision-making model you use while developing real estate projects?
3. How do you assess the need for a particular development project?
4. Do you have specific evaluation methods you use while assessing the appropriateness of the idea? If so, what are they?
5. How do you make “a go decision”?
6. What criteria do you use to make “a go decision”?
7. How do you make “a no-go decision”?
8. What criteria do you use to make “a no-go decision”?
9. When do you actually begin to commit extensive resources to the idea?
10. How do you finance your projects?
11. Who are the major players involved in the pre-development stage of the office development projects?
12. With what kind of results do you become convinced of a project’s feasibility?
13. How do you convince other participants / shareholders of the viability of the project?
14. How do you analyze the market and its development trends?
15. Do you analyze the macro market along with the local (micro) market? How?
16. How do you segment the market for your project?
17. How do you identify the consumer profiles?
18. How do you analyze the current competition?
19. How do you identify the potential for future competition?
20. How do you select a site?
21. How do you define the office demand?
22. How do you identify the existing and future office supply?
23. How do you assess the market-share that your project might capture?
24. What kind of marketability strategies do you have for your development projects?
25. How do you estimate the project’s cost?
26. How do you estimate the probable cash flow that the project will generate?
27. What key financial ratios do you use to check the feasibility of the project?
28. How do you estimate the expected property value?
29. What are the general payback periods you face with your completed office development projects?
30. What are the vacancy rates for your completed office development projects?

APPENDIX C

INFORMATION SHEET

INFORMATION SHEET
(Assessment and enhancement of decision-making models used for the pre-development stages of office projects in Turkey)

You have been asked to participate in a research study, which is about decision-making models currently used by Turkish real estate development companies. You were selected to be a possible participant because you are senior level management personnel, who have the ability to give decisions in the real estate development projects. Approximately twenty people have been asked to participate in this study. The purpose of this study is to explore and identify the disparities of the decision-making models currently used by Turkish real estate development companies in the pre-development stage of office development projects and to recommend necessary additions and/or deletions for the enhancement of these company models.

If you agree to be in this study, you will be asked to explain your way of doing business and afterward will be asked to review and correct the diagramed model. You understand that if you agree to participate in this research, you will be audio taped and the tape will be retained indefinitely. This study will take about three hours of your time totally. There is no risk in participating to this study and there are no benefits for your participation. You also understand that you have the right to choose to participate or not.

This study is confidential and while your comments may be used in the study, your name will not be included in the study. The records of this study will be kept private. Your responses will be coded and no identifiers linking you to the study will be included in the dissertation or any sort of report that might be published. Research records will be stored securely and only the researcher will have access to the records.

If you decide to participate, you are free to refuse to answer any of the questions that you find as privileged information for your company. You can withdraw from the study at any time without consequence. If you have any questions about this study, you may contact the researcher or her advisor at:

Isilay Civan
civan@tamu.edu
011-90-216 465 0031
Goksu Evleri, Kartopu cad.
B221a, Anadolu Hisari
Istanbul / Turkey, 81650

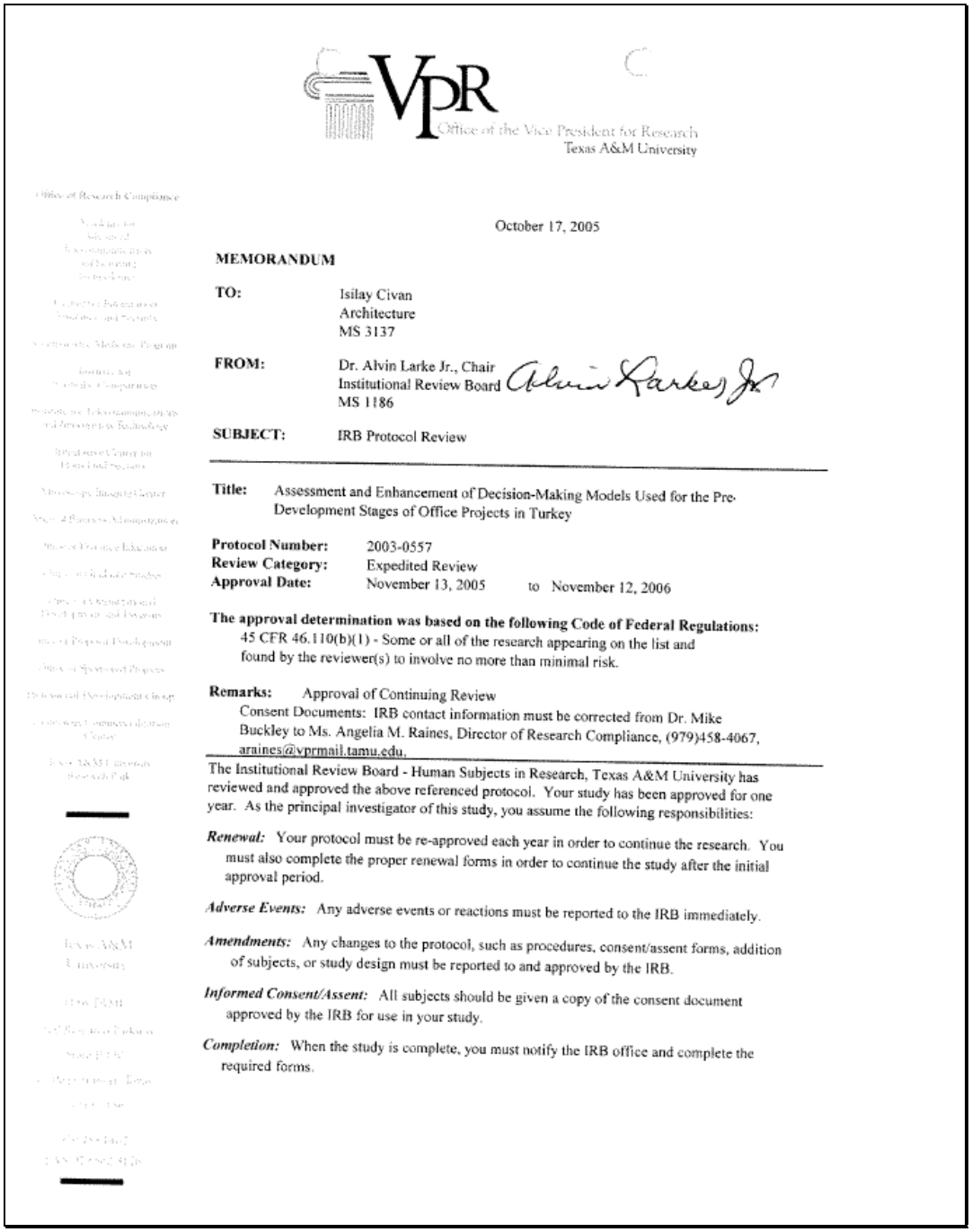
Prof. Dr. Bob Johnson
rejohnson@tamu.edu
001-979-847 9357
College of Architecture
Texas A&M University
College Station, TX, 77840

This research study has been reviewed by the Institutional Review Board- Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, you can contact the institutional Review Board through Dr. Michael W. Buckley, Director of Research Compliance, Office of Vice President for Research at (979) 845-8585 (mwbuckley@tamu.edu).

You have read the above information. You have asked questions and have received answers to your satisfaction. You have been given a copy of this information sheet for your records. By answering the questions, you agree to participate in the study.

APPENDIX D

IRB APPROVAL



VPR
Office of the Vice President for Research
Texas A&M University

October 17, 2005

MEMORANDUM

TO: Isilay Civan
Architecture
MS 3137

FROM: Dr. Alvin Larke Jr., Chair
Institutional Review Board
MS 1186

SUBJECT: IRB Protocol Review

Title: Assessment and Enhancement of Decision-Making Models Used for the Pre-Development Stages of Office Projects in Turkey

Protocol Number: 2003-0557
Review Category: Expedited Review
Approval Date: November 13, 2005 to November 12, 2006

The approval determination was based on the following Code of Federal Regulations:
45 CFR 46.110(b)(1) - Some or all of the research appearing on the list and found by the reviewer(s) to involve no more than minimal risk.

Remarks: Approval of Continuing Review
Consent Documents: IRB contact information must be corrected from Dr. Mike Buckley to Ms. Angelia M. Raines, Director of Research Compliance, (979)458-4067, araines@vprmail.tamu.edu.

The Institutional Review Board - Human Subjects in Research, Texas A&M University has reviewed and approved the above referenced protocol. Your study has been approved for one year. As the principal investigator of this study, you assume the following responsibilities:

Renewal: Your protocol must be re-approved each year in order to continue the research. You must also complete the proper renewal forms in order to continue the study after the initial approval period.

Adverse Events: Any adverse events or reactions must be reported to the IRB immediately.

Amendments: Any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design must be reported to and approved by the IRB.

Informed Consent/Assent: All subjects should be given a copy of the consent document approved by the IRB for use in your study.

Completion: When the study is complete, you must notify the IRB office and complete the required forms.

APPENDIX E

BRIEF OVERVIEW OF TURKEY

Turkey, with a population of over 68 million and 65% of its people under the age of 30, is one of the most promising and dynamic emerging markets in the world. Over the last two decades, Turkey has largely liberalized its economy and integrated with the global economy. In 1996, Turkey entered into a customs union with the European Union and was accepted as a candidate for full membership in 1999. Bordering the Black Sea in the north and the Mediterranean Sea in the south, Turkey has historically played a pivotal role in economic cooperation among the economies of Europe, Central Asia and the Middle East (figure E-1). The country is a strong potential candidate to become the center of commerce between these three continents.

Figure E-1
Map of Turkey

Political System

Turkey, unlike many of its counterparts in the developing world, has been able to make the transition from a single-party to a multi-party regime at a relatively early stage of its political history[11]. This process has not been easy and it has been marked by periods of crises. Since its transition to multi-party politics in 1946 and despite military interventions, competitive elections and the peaceful transfer of power following national electoral contests have been the principal characteristic of Turkish politics. Although some weaknesses exist, political parties in Turkey have displayed a relatively high degree of organizational strength, complexity and continuity.

The democratic experience in Turkey proved to be difficult to sustain and similar to many developing countries, this transition was suspended as a result of three military coups. However, the military regimes in Turkey were short-lived and the transfer of power to civilians took place after just a few years. Nevertheless, the military, continues to perceive itself as the guardian of the republic, especially its unitary and secular nature, and continues to be a significant and, more importantly, independent actor in Turkish politics. Although military coups interrupted the ascendancy of party politics in Turkey, political parties revamped themselves vigorously in the aftermath of each interruption. Both the organizational structure and the leadership of the parties continued, although sometimes under different party names. The leadership had also been excluded from official positions for some years, only to come back when their ban

[11] Information presented in this section is compiled from Altunisik & Tur (2005) and U.S. Department of State (2005) reports.

was lifted. Moreover, it is political parties that the newly emerging social movements turned to for organizational support and political voice. When the existing political parties proved insufficient to meet the demands of rising groups and new social developments, a new political party was formed that presented these new concerns with its program and discourse. Thus, political parties are seen as legitimate representatives of society.

The 1982 a Constitution, drafted by the military in the wake of the 1980 coup, proclaimed Turkey's system of government as democratic, secular, and parliamentary. The president and the Council of Ministers led by the prime minister share executive powers. The president, who has broad powers of appointment and supervision, is chosen by Parliament for a term of 7 years and cannot be re-elected. The prime minister administers the government. The prime minister and the Council of Ministers are responsible to Parliament.

The 550-member Parliament carries out legislative functions. Election is by proportional representation. To participate in the distribution of seats, a party must obtain at least 10% of the votes cast at the national level as well as a percentage of votes in the contested district according to a complex formula. The president enacts laws passed by Parliament within 15 days. With the exception of budgetary laws, the president may return a law to the Parliament for reconsideration. If Parliament re-enacts the law, it is binding, although the president may then apply to the Constitutional Court for a reversal of the law. Constitutional amendments pass with a 60% vote, but require a

popular referendum unless passed with a two-thirds majority; the president may also submit amendments passed with a two-thirds majority to a popular referendum.

The judiciary is declared to be independent, but the need for judicial reform and confirmation of its independence are subjects of open debate. Internationally recognized human rights, including freedom of thought, expression, assembly, and travel, are officially enshrined in the Constitution but have at times been narrowly interpreted, can be limited in times of emergency and cannot be used to violate what the Constitution and the courts consider the integrity of the state or to impose a system of government based on religion, ethnicity, or the domination of one social class. The Constitution prohibits torture or ill treatment; the current government has focused on ensuring that practice matches principle. Labor rights, including the right to strike, are recognized in the Constitution but can be restricted.

The 1982 Constitution provides for a system of State Security Courts to deal with offenses against the integrity of the state. The high court system includes a Constitutional Court responsible for judicial review of legislation, a Court of Cassation (or Supreme Court of Appeals), a Council of State serving as the high administrative and appeals court, a Court of Accounts, and a Military Court of Appeals. The High Council of Judges and Prosecutors, appointed by the president, supervises the judiciary.

Economic System

Turkey's dynamic economy[12] is a complex mix of modern industry and commerce along with a traditional agriculture sector that in 2004 still accounted for more than 35% of employment. It has a strong and rapidly growing private sector, yet the state still plays a major role in basic industry, banking, transportation, and communication. The largest industrial sector is textiles and clothing, which accounts for one-third of industrial employment; it faces stiff competition in international markets with the end of the global quota system. However, other sectors -notably the automotive and electronics industries- are rising in importance within Turkey's export mix.

Turkey began a series of reforms in the 1980s designed to shift the economy from a static, insulated system to a more private sector, market-based model. In recent years the economic situation has been marked by erratic economic growth and serious imbalances. Real GNP growth has exceeded 6% in many years, but this strong expansion has been interrupted by sharp declines in output in 1994, 1999, and 2001. Inflation, in recent years in the high double-digit range, fell to 9.3% by 2004 - a 30-year low. Despite these strong economic gains in 2002-04, which were largely due to renewed investor interest in emerging markets, the International Monetary Fund (IMF) backing, and tighter fiscal policy, the economy is still plagued with high debt and deficits. The public sector fiscal deficit exceeds 6% of GDP - due in large part to the huge burden of interest payments, which accounted for more than 40% of central government spending in 2004,

[12] Information that is presented in this section is compiled from IMF (Krueger, 2005), CIA (2005), OECD (2004) and TDA (1999) reports.

and to populist spending. A major political and economic issue over the next decade is whether or not Turkey will become a member of the EU.

Turkey has a number of bilateral investment and tax treaties, including those with the United States, that guarantee free repatriation of capital in convertible currencies and eliminate double taxation. Nevertheless, foreign direct investment totaled only $16.4 billion as of June 30, 2003, a modest sum reflecting investor concerns about political and macroeconomic uncertainty, burdensome regulation, and a large state role in the economy. According to Guy Pfefferman, director of International Finance Corporation's Global Business School Network, although many foreign investors are interested in Turkey, a number of issues such as political instability, a high inflation rate, difficulty in obtaining financing, lack of promotion and image, legislation, enforcement of the laws, and bureaucracy, including tax administration, slow pace of privatization, high number of family-run businesses, and a thin capital market inhibit investment (Forum Istanbul, 2004).

Turkey seeks to improve its investment climate and has taken steps to do so through administrative streamlining, an end to foreign investment screening, and strengthened intellectual property legislation. The Turkish privatization board is in the process of privatizing a series of state-owned companies.

Inflation and Monetary Policy: Turkey's principal economic problems remain inflation and public sector indebtedness. Annual consumer price inflation averaged around 80% in the 1990s and nearly 50% in 2000 through 2003. Wholesale price inflation has been at comparable levels. In 2003, however, Turkey's Central Bank finally

succeeded in controlling inflationary pressures: as of February 29, 2004 the previous 12-month increase in the CPI had fallen to 27.01%.

Turkey's current economic reform program has had two main goals: conquering the persistently high inflation of 1990s and the associated macroeconomic instability, and reducing public debt to sustainable levels. Following the 2000-01 crisis, which saw the collapse of the crawling peg under the previous International Monetary Fund (IMF) program, a new 3-year standby agreement was approved by the IMF in February 2002. It focused on combating inflation through a floating foreign exchange regime and tight monetary policy conducted by the newly independent Central Bank. The program also required fiscal discipline leading to a 6.5% primary surplus target in 2003 and 2004 and continued structural reforms. The program began to show results through lower inflation, resurgent growth and, at least, partial success in maintaining fiscal discipline. GDP growth reached 7.8% in 2002 and 5.8% in 2003; although final figures are not yet available, the government 2003 fiscal data were expected to come close to its full-year primary surplus target of 6.5% of GDP. The public debt-to-GNP (Net Public Debt to GNP) ratio, after increasing rapidly to 92% in the crisis year of 2001, fell to 79.0% in 2002 and became 72.5% as of 2nd quarter of 2003.

Corporate System

Business Climate & Labor Market

Considerable progress has been made in creating a much-improved climate for business[13]. The government has now embarked on reforms aimed at cutting red tape –the bane of any would be entrepreneur– improving the efficiency of the court system; and bringing business standards more into line with those of the European Union.

It now takes only three procedures instead of 13 to open a business; and the average time to register has recently been cut to less than a week. Plans are being developed to create a one-stop-shop system for obtaining business permits.

A more flexible labor market would also provide a stimulus for investment. Labor market rigidities and high minimum wages act as a disincentive to hire new staff. They encourage participation in the informal sector, with consequences for tax revenues and for export growth, since informal enterprises cannot export. Labor market inflexibility explains at least some of the current stickiness of the unemployment rate.

The costs of complying with statutory employment legislation remain high: in Turkey, firms have to pay 112 weeks wages to lay someone off, compared with 40 for the OECD average. And, on measures such as the difficulty of hiring workers and the rigidity of working hours, Turkey currently scores poorly in international comparisons. Yet, evidence suggests that once employers are free to fire workers, they start hiring them. Changes in labor market regulation would greatly improve the business climate, and could do much to foster growth in new areas of economic activity. And by helping

[13] Information that is presented in this section is compiled from IMF (Krueger, 2005) and TDA (1999) reports.

to reduce unemployment, labor market reforms could build greater recognition that economic reforms bring tangible rewards.

According to Anne Krueger, First Deputy Managing Director of the IMF (Forum Istanbul, 2005), experience both in the European Union and beyond shows that countries with structural rigidities in the labor market tend to struggle with high unemployment rates and sluggish growth. Yet, those countries like the United States, the United Kingdom, Australia and Chile, where reforms have increased flexibility have had the most success in reducing unemployment and increasing employment. Significant enhancements in Turkish wage and price flexibility will facilitate more rapid and sustained growth, help raise real incomes and help reduce poverty.

Foreign & Domestic Investment

Turkey has been pursuing liberal and outward-oriented economic policies since the mid-1980s. The Government of Turkey (GOT) views foreign direct investment as vital to the country's economic development and prosperity. Accordingly, on paper Turkey has one of the most liberal investment regimes of the OECD. Almost all areas open to the Turkish private sector are also fully open to foreign participation and investment. While GOT policies do not discriminate against foreign investment, as is the case in many nations, all companies –regardless of ownership– are subject to political uncertainties, excessive bureaucracy, and sometimes-unclear legal environment that prevail in Turkey. As a result, aggregate foreign direct investment in Turkey from 1980-1999 totaled only slightly more than US$12 billion. The new Turkish policies on international arbitration and supporting legislation have helped to address this problem.

The 2003 Foreign Direct Investment Law helped level the playing field for foreign and domestic investors. Economic and judicial reforms like these as well as prospective European Union (EU) membership are expected to boost FDI.

Sources of Financing

Description of Banking System

With 62 commercial banks and 19 development or investment banks and total sector assets of only US$133.5 billion at the end of 1999, Turkey is over-banked. However, the banking sector plays less of a financial intermediary role than one would expect in an economy of Turkey's size and sophistication. The four state-owned commercial banks still hold a disproportionately large 35 percent of bank assets, although their share may be declining. The sector's five and ten largest banks also have seen their share of assets decline steadily since financial sector liberalization began to take hold in 1985. In terms of trade finance, treasury operations, electronic banking, and information management, the dozen leading Turkish banks are as sophisticated as their other OECD counterparts. However, given chronically high government budget deficits, bank profitability has been treasury-based, not lending-based, and most banks have yet to develop solid lending cultures and risk-asset management systems.

One hundred percent deposit insurance since 1994 is an additional complicating factor. Moreover, accounting practices are not at commonly accepted world standards, nor are they being evenly applied across the sector.

General Financing Availability

Traditionally, Turkish corporations have satisfied most of their financing requirements through the banking industry. Corporation / banking relationships are close. Locally, commercial banks account for about 80 percent of the credits outstanding in the Turkish financial system. However, given the continuing gap between Turkey's extensive needs and its limited internal resources, external financing of public and private project investment is a crucial factor in future years. Because of high inflation and high public-spending requirements, the cost of local currency funds is very high. Exporters are advised to provide financing for their exports. In addition to short and medium-term credit available from commercial banks in local and foreign currencies, lower-cost Turkish Lira credits are also available from the Turkish Eximbank. Project financing is available through a multitude of sources including Turkish and foreign commercial banks and investment banks. American banks active in Turkey are among the leaders in project financing.

Efficient Capital Markets and Portfolio Investment

Commercial credit in Turkey is allocated according to market terms. However, because of high local borrowing costs (real interest rates can exceed 40 percent) and short repayment periods, both foreign and local investors frequently seek credit from international markets to finance their activities. In addition, the GOT's continued offer of subsidized loans to farmers, small and medium-sized enterprises, and for certain mortgages distorts Turkish money markets.

The banking sector experienced a serious crisis in 1994, during which three small banks failed. The banking system has since recovered, but still faces difficulties given its over reliance on income from treasury operations, weak supervision, and murky, often inconsistent accounting practices. Although the Central Bank supervises bank activities to guarantee that banks meet liquidity requirements and operate responsibly, the Undersecretariat of the Treasury enforces banking laws and determines the disposition of insolvent banks. From the end of 1998 to the end of 1999 seven commercial banks were taken over by the Central Bank Deposit Insurance Fund, joining another bank which has been under Deposit Insurance Fund management since 1997.

A large number of leasing companies operate in Turkey, primarily owned by Turkish banks. They finance purchases of expensive capital goods such as aircraft, auto fleets or special equipment. Financial leasing used to account for only 1 to 2 percent of capital expenditures in Turkey versus 20 percent in developed countries. The terms of leasing are usually four years with a balloon payment at the end.

Turkish factoring companies (again, usually subsidiaries of banks) generally belong to the International Factors Group based in Belgium. Like leasing companies, all factoring and forfeiting companies are experiencing funding difficulties. Both factoring and forfeiting maximize cash flow, reduce transaction risks, and may enhance competitiveness by offering flexible payment terms to the buyer.

APPENDIX F

GENERAL REGULATIONS OF REICS

Business Line

The Capital Market Board (CMB) passed the first regulation in 1975 regarding the real estate investment companies (REICs) incorporated to invest in real estate or capital market instruments on real estate[14]. The initial regulations were amended in 1998 to overcome the practical problems experienced. The rate of Corporation Tax and Income Tax withholding is zero for the Real Estate Investment Companies (REIC) having legal entity status. The tax exemption available to those who earn a profit from REICs has been lifted by the Law No. 4369 from 01.01.1999 on.

The REICs enjoy joint stock company status like other corporations whose shares of stock are traded on the Istanbul Stock Exchange. However, they differ significantly from other corporations in three ways. First, they conduct their business in accordance with the Communiqué on the Real Estate Investment Companies. Second, they are exempt from taxation. Third, they are obliged to sell 49% of their issued shares of stock to the public. Pursuant to the communiqué of the CMB, the REICs are obliged to apply to the CMB for registration of their shares of stock within one year following the completion of incorporation or transformation formalities.

[14] Information that is presented in this section is compiled from Company Ih's website.

Essentials of Business

The REICs may

1. buy and sell real estate certificates, securities on property issued in consideration of a real property loan. The CMB has deemed such securities as being similar to the aforesaid ones.
2. buy and sell offices, residences, office buildings, shopping malls, hospitals, hotels, warehouses, commercial parks and similar real properties to earn sale profit or rent.
3. buy and sell land and lots to earn a profit upon sale through buying the ownership or developing building projects by creating independent sections.
4. sell any real property on which a superior real right in the form of an independent and permanent right is created after obtaining the ownership thereon for development of a building project on such property by public or private entities or real persons on behalf of the REIC, in order to earn a profit.
5. invest in any real property development project for which all licenses required by the law have been obtained, of which the designs have been prepared and ratified, and in respect of which the existence, completeness and accuracy of all documents required by the law for commencement of the construction have been certified by an independent expertise firm, at any stage of the project by obtaining the title or creating a superior right on such real property to earn real property development profit or rent.

6. create and use usufruct[15] on any real property, create time-share servitude on any real property, become superior right holder on land they own to earn a profit.
7. realize development projects through the Build-Operate-Transfer method by creating a superior real right on the underlying real property, providing that the specific requirements have been fulfilled and are subject to special arrangements.
8. invest in real property backed projects which meet the specific requirements without aiming at obtaining the title or creating independent section usufruct thereon in accordance with the terms of the contract with a view of earning a share in the future rents, providing that securities deemed appropriate by the CMB are in place.
9. invest jointly in projects based on real estate which meets the specific requirements by creating independent section usufruct without limiting the disposition of the joint owners on the section allocated to the REIC on the contract between them.
10. buy and sell real estates abroad by obtaining the title thereon and investing in foreign securities, providing they are based on real estates.
11. lease real properties from third persons and re-lease them to earn rent, providing that the special contract terms allow this.

[15] Usufruct: The right to use and enjoy the profits and advantages of something belonging to another as long as the property is not damaged or altered in any way (The American Heritage Dictionary, 2000).

12. execute swap and forward transactions to hedge the exchange rate risk arising from transactions in foreign currencies and the interest rate risk arising from debts, write options, and purchase futures other than those based on commodities.

Restrictions on Investment

The REICs may not

1. own more than 5% of the shares of stock or voting rights of any corporation.
2. invest in gold and other precious metals.
3. invest in capital market instruments which are not traded in the Exchange or in a market organized outside the Exchange. It is obligatory that the capital market instruments must be bought and sold through the Exchange.
4. invest in commodities or futures based on commodities.
5. sell securities short or lend securities.
6. trade derivatives other than for hedging the risks.
7. pay a commission or incur any expense which exceeds 3% of the value of assets bought into the portfolio, save for statutory taxes, duties and charges.
8. invest in an asset, the transfer of which is subject to any restriction.

Restrictions on Portfolio Investment

1. The REICs may invest in real estate certificates and securities on a property which are issued in consideration of real property loan up to 20% of the value of the portfolio.
2. The REICs may invest in other capital market instruments and reverse repo up to 10% of the value of the portfolio. However, if the cost of a property or a project bought into the portfolio is being paid through progress payments or in installments, the cash surplus corresponding to the due payments may be invested in reverse repo, time or demand deposit, shares, government bonds, treasury bills, debentures, promissory notes, mutual funds and similar securities.
3. The amount of investment in shares and type A mutual funds may not exceed 5% of the value of the portfolio.
4. The amount of investment in foreign real estates and capital market instruments based on real estate may not exceed 10% of the value of the portfolio.
5. The ratio of the land and lots in the portfolio on which no development has occurred within one year since the date of purchase to the value of the portfolio may not exceed 10%.

APPENDIX G

PRE-ASSIGNED CODING SYSTEM

1. Specific goals and objectives
2. Formalized decision-making model
3. Assessment of the need for a particular development project
4. Specific evaluation methods
5. "Go decision"
6. Criteria for "a go decision"
7. "No-go decision"
8. Criteria for "a no-go decision"
9. Commitment to extensive resources
10. Financing of the projects
11. Major players involved in the pre-development stage
12. Project's feasibility
13. Convincing other participants / shareholders of the viability of the project
14. Analyzing of the market and its development trends
15. Macro market analysis along with the local (micro) market
16. Market segmentation
17. Identifying the consumer profiles
18. Analyzing the current competition
19. Identifying the potential for future competition
20. Site selection
21. Defining the office demand
22. Identifying the existing and future office supply
23. Assessing the market-share that project might capture
24. Marketability strategies
25. Estimating the project's cost
26. Estimating the probable cash flow that the project will generate
27. Key financial ratios used to check the feasibility of the project
28. Estimating the expected property value
29. General payback periods that the completed projects face
30. Current vacancy rates for the completed office development projects

APPENDIX H

COMPANY INTERVIEW RESPONSE SUMMARIES

The purpose of this section is to summarize each interview under four separate parts. Each interview summary starts with a brief company description, followed by the summary of responses to the general approach questions (Q 1-13), market analysis questions (Q 14-24) and financial feasibility analysis questions (Q 25-30), respectively. Statements in italic-format highlight the pre-assigned codes, which were the target of the related interview questions.

K Construction Co.

Company Description

Company K designs, develops and constructs “commercial and residential projects” mostly in “Levent, Maslak and Sisli-Mecidiyekoy arteries”. Recently, Company K also started to “individually acquire large properties for developing self-contained projects that will meet the needs of future life styles”. For this purpose, “trends and developments toward future living patterns” are studied in detail. The real estate development department of Company K follows up all city planning regulations and constantly updates its database of market values. Company K has a well-deserved reputation as “the contractor of major turnkey construction projects”, as evidenced by major private and public clients' preference in choosing Company K to build their important projects. In fact, since its establishment in 1956, Company K completed “many shopping centers and office buildings (more than 15 office buildings, mostly on

the European side of Istanbul; Levent, Besiktas and Maslak) in and outside of Turkey". Most of the projects completed by Company K constitute "important milestones in the course of Turkish civil architecture" and stand out for their "high quality workmanship". Company K, together with its joint venture partner (which is a financial institution), is also recognized as a company, which can "quickly adopt and apply latest developments in construction technology". This fact is reflected in the choice of high-tech equipment owned by the company.

Summary of Responses to the Questions 1-13

Company K has three *specific goals and objectives* while developing an office project: "first profitability, second to be able to compensate the office demand of the big companies" - including their own need - and "third steady rental income". Even though Company K does not have a *formalized decision-making model*, they state that they "follow certain important steps like; land option, feasibility analysis, title use analysis, prime location, market analysis, supply-demand analysis, rental rate/sale price determination, schematic design, cost analysis, net cash flow analysis, and profitability analysis", in each of their projects.

The *need for a particular development project* is generally assessed by "personal observation". If there is a demand in the market, Company K claims that they will "know about it, since they follow the market pretty closely". Under the current situation, Company K feels that in order for an office development idea to be *appropriate* in Istanbul, either there should be a "custom-build project demand from a company" or "at least 40% pre-leased space within the subject project".

General rules of thumb that Company K uses while making a *go/no-go decision* in the predevelopment stage are as follows: “For the development projects if profitability is lower than 30% it is a no-go decision; for the general contracting projects – since there is no risk taken by the firm - if profitability is less than 7% - 10% it is a no-go decision”. Figures above these thresholds are criteria for a *go decision*. However, since operating in the Turkish real estate market is harder than most of the other countries, characteristically due to “the instability of the economy”, even though Company K targets “30% profitability” in its initial calculations, it has never been able to “achieve more than 15% profitability” at the end.

As it is the case for most of the companies doing business in Turkey, Company K also usually does not begin to commit *extensive resources* unless the project gets “a go-decision for the construction phase”. Biggest help in being able to do this is a common practice in Turkey called “land-to-equity swap agreement[16]”, where the landowner exchanges his/her land for a certain percentage of shares on the end product. This share can either be an actual physical percentage of the building (certain number of floors or units) or a profit share, latter being a more recent but less common practice. However “swap agreement” is becoming less attractive for the developers as most landowners are still “stuck with the old tradition of exchanging the land for 50% of the project, which is not found to be feasible anymore”. According to Company K, “if a developer is looking for profitability, any deal more than 25% - 30% exchange will not work in current

[16] Developer makes a contract with the landowner. In this contract landowner gives a certain percentage of shares to the developer, but with a mortgage placed on each share. As assured phases of the construction are completed, landowner dissolves certain amount of these mortgages on the shares. With this approach there is no initial capital investment on land. Capital investment occurs as the construction progresses.

circumstances". "Since credits are still pretty expensive in Turkey and can reduce the profitability of the project significantly", Company K typically uses "*equity financing*". However by creating marketable projects, Company K claims that typically it "does not need to use equity that exceeds 5% - 10% of the total project cost". *Major players* that take place in the pre-development stage of a project are "the project group, the executive board, the execution board and the marketing people".

Company K considers a *project feasible* "if they believe that their product is marketable within the prices that they expect to achieve". If Company K "likes a project but considers it too risky", it seeks to "split the risk among one or more partners depending on the size of the project". And in these cases Company K argues that "because of the reliability and trustworthiness of the company name", once Company K believes in the project, "finding and *convincing other partners* to invest in that project does not become an issue".

Summary of Responses to the Questions 14-24

While analyzing *the market and its development trends*, Company K relies on "both analytical figures and the gut feeling of their managers", which seems to be a common practice in the market. Company K first requires a "highest & best use analysis", followed by "a project-based market analysis from one or more consultant companies" to see figures like the supply-demand ratio of the market, prospective rental rates, size and price of the units, etc., if the result of the former is favorable. Company K also uses consultants while identifying the potential *consumer profile*, their income levels, preferences, etc.

By following the market rather closely, Company K feels that they are rather "familiar with their *current* and *future competition* in the market". In a similar way, by observing the market pretty closely, they feel that they "have the latest facts about the market, regarding the office demand, existing and future office supply". However, in the pre-development stage of each project, they still choose to *outsource* the market analysis to several consultants just to be sure that they are not missing out any crucial information. Afterward they also assign their own *in-house* crew "to double-check the facts" that the consultants provide to them.

While *selecting a site* most important criteria for the company are "positioning on a prime location, in the Central Business District (CBD) and easy accessibility of the site". Company K does not feel the need to assess the *market share* that their project might capture, as they argue that they have "a unique situation in the market", which helps them "market their product fairly easily". They believe that the key to their *marketability* success is "not requesting unrealistic prices, while delivering high-quality, reliable and rewarding projects to the market". Although they use all available marketing strategies, including direct mailing, brochures, personal meetings, adds in major journals and newspapers, etc., Company K states that they did "not need much marketing so far either".

Summary of Responses to the Questions 25-30

Company K feels quite "confident about the accurateness of their *project cost* estimates" as they have been in the business for so many years. They rely on their own database that they have created over the years while making predictions regarding the

probable *cash flow* that the project will generate, the *feasibility* of the project, the expected *property value* and payback periods. They perform a comparative rental rate analysis, where they adjust each figure according to each competitor's strengths and weaknesses, before deciding the appropriate rental rate for the subject project.

Most important *key financial ratio* for the company is "to keep its equity investment lower than 10% of the total project cost at all times". Since the company "wears multiple hats" -the general contractor, the marketing firm and the investor of the project- the company tries to keep its cap rate under 10%, and tries to reach 30% in the total profitability. Company K believes that wearing different hats allows them to be flexible, enables them to seek just one lump-sum profit rather than calculating several profit margins for each different job that it performs.

If the company decides to hold the building for rental revenue, they expect a "6-7 year *payback period*". However if their aim is to sell the building, they generally complete the project in "three years". Company K claims that they have "never dropped below 90% *occupancy rate* in the buildings that they own".

U Construction Co.

Company Description

Company U is originally a contractor company that "started developing real estate projects in order to create new projects for its core business". Till now, it has built a total of "five office buildings" that are "mostly in the Asian side of Istanbul" (two in Altunizade, one in Kozyatagi, one in Levent and one in Russia).

Summary of Responses to the Questions 1-13

Company U's *specific goals and objectives* in developing a real estate project are "creating general contracting opportunities for the company, profitability, constant cash flow achieved by monthly rental revenue, which would be used to support the company's core business activity during though times". Although the company has "a *formalized decision-making model* for hotel projects, which is dictated by the lenders", they "don't have such formalized model for the office projects mainly because there is not a similar lender system".

Company U believes that "in Istanbul there are some certain popular locations to develop office buildings". However, "having a site on a prime location is not enough for success". One should also need to *assess the need* for a particular quality building (Class A, B, etc.), which can be a questionable issue in the Istanbul market, as although "some of the buildings do not have accordance with certain regulations and specifications, they can be accepted as Class A, just because of their exterior appearance".

While evaluating the *appropriateness of an idea*, Company U first goes to visit the site that landowner considers a project on. Next a demand analysis is made either by the in-house staff or with the assistance of a marketing firm. Afterward, marketability and initial feasibility analyses of the project are undertaken. While conducting these analyses both back-door and front-door approach is taken into account. Cost side is generally accepted to be "easier to predict (+/- 10% accurate estimates)" than the revenue and/or sales side in the Turkish economic environment.

Company U requires an “approximately 25% per year profit” out of their initial capital investment to make a *go-decision* for a project. “Probable payback period and expected property value are the major criteria” that are taken into account while considering a *go-decision*. “A payback period of no more than 90-100 months” is desirable. “Although the formal and informal data that is being collected in the pre-development stage is used as an input during the decision-making process, a *go-decision* is made by the boss and might depend solely on his/her intuition at the end.”

Company U considers “bad location, unrealistic share requests of the landowner” as quick deal breakers. “Before the 2001 crises in Turkey land prices were so high that if one were to purchase the land beforehand, the project would fail to be feasible at that very moment.” That’s why companies mostly try to “include the landowner as a partner to the project (previously discussed as swap agreement), which makes the quality of the landowner crucial” for the success of the project. Another important criterion for *a go/no-go decision* is “the development potential of the neighborhood that the site is on”. “Demand for a project that is located in a bad neighborhood should be carefully assessed, as some landowners have some fantasy projects, which are just created to transform the dumb capital into a supposedly smart capital.”

As a benefit of the swap agreement Company U also doesn’t *commit extensive resources* to the idea in the pre-development stage. The company *finances* its projects by initially using its own capital (equity), then relies on self-financing, which means payment of the later phases that is under construction with the revenue gained from the sales of the previously completed units. Company U argues that “pre-leasing is still not a

common practice in Turkey". However, "with the help of a respectable name in the sector gained by timely delivery of a high-quality product, a company can attract prospective real estate investors who might like to act as silent partners".

Major players of the company in the pre-development stage are "the boss, the shareholders, the architect (out-sourced), and the project managers". For them to be convinced of a *project's feasibility*, "initial capital investment should be equal or lesser than 40% of the total investment budget, and at the end should get back the initial investment and make an additional 25% profit, which accounts for the interest rate (5%) and the risk taken (20%), including a safety margin set for the unanticipated events like changes or delays caused by others, economic crises, weather or Acts of God, etc. that might delay the whole process".

Summary of Responses to the Questions 14-24

Company U uses the monthly and/or quarterly reports of real estate consultant firms to analyze the *market and its development trends*. Company U considers Istanbul market as "an easy market to survey because of its manageable size". Since the company just considers buildings that fit the international standards as Class A buildings, they believe that "there are only approximately 50 Class A office buildings in the Istanbul market", and thus even though they might cease to follow the market for a while, it is easy for them to catch up. As a company they do not feel the need to analyze the *macro market* along with the local (micro) market.

Company U agrees that if there is "a perceived structure of the neighborhood and this structure has developed for a specific reason, it needs to be taken into account while

deciding on a project". The company also argues that "there are some specific business segments that prefer certain locations in Istanbul and these preferences need to be considered while identifying the *consumer profiles* in these specific locations". They believe that "some locations are calling for office buildings". That's why it is hard for the company to believe how "Maslak region has developed as a business artery without the adequate infrastructure, while on the other hand, Kavacik region -with such an incredible potential- has been developed with such a narrow vision". *Current and prospective competition* is being analyzed with the aid of the consultant reports.

Company U argues that consulting firms that do business in Turkey "usually have a conflict of interest, as they also do the marketing of the project once they prepare the market analysis". Company U suspects that "even though these companies wouldn't support a project that is totally unmarketable, they might try to convince their clients to go on with a project that might not be the most desirable project for that particular location, just to create profit for themselves". That's why, Company U prefers to double check the market information, including the existing and future *office supply* and *demand* data, gathered by the consulting firms by their own *in-house* staff before determining the proper rent margins and the financial feasibility of the project.

The company assesses the *market-share* that their project might capture on a regional basis. On the other hand, they accept that they "don't know much about the *marketability strategies*". Thus, they typically outsource the marketing of the project. Nevertheless they also believe that "quality pays back", which simply means that once they develop a high-quality building on a prime location with right amenities, they will

be ahead of their competitors in any case. Consequently they argue that “because they know how to build high quality and non-problematic buildings, real estate developments are handled primarily by construction-based companies in Istanbul, Turkey”.

Summary of Responses to the Questions 25-30

Company U believes that “planning doesn’t work in economies like Turkey, as things can change so drastically in such a short time without any prior notice at all”. Thus although they try to be as accurate as possible in their calculations, they include certain safety margins while making assumptions. However among the estimates that need to be done in the predevelopment stage, they find the *project’s cost* the least problematic one. They typically consider the “construction cost to be 60%-70% dependent on the Turkish Lira (TL) fluctuations”.

Among the *key financial ratios* expected property value and debt service coverage ratio are the most frequently used ones by the company. However, debt service coverage ratio is calculated in a different way. They consider the capital that they invest in a project as the debt of that project to the company, and assess whether a certain project can payback this debt at a certain ratio in a certain period of time. Company U also feels that since there is always something happening in the Turkish economy, they “don’t need to think of different scenarios and apply these into sensitivity analysis”. They also believe that they “cannot actually take into account all these factors, since in that case it might be impossible to develop any project at all, as each time the decision will be 90% more likely to be a *no-go decision* than a *go decision*. Company U believes that “Turkish real estate market is a high-risk environment, which requires developers

that can take high risks and can lead to either really high profits or quite terrible losses". The company considers "100-120 months" as acceptable payback periods and claims that it has "a zero vacancy rate", as currently the only building that it keeps in its portfolio is the one that it occupies.

G Construction Co.

Company Description

Company G is mainly a construction company. However, "when approached by landowners it also acts as a developer besides being the general contractor" for the subject project. Company G has developed "four office buildings" till now, "all of them in the Maslak area".

Summary of Responses to the Questions 1-13

While developing real estate projects, Company G "defines (its) *goals and objectives* according to the different roles that it might be taking in each project". For instance if the company is also the general contractor for a project they tend to develop the project to sell; however if they are the investor in a project they tend to develop to keep the building for its rental income. Company G doesn't have a *formalized decision-making model*. It argues that the "*go-decisions* are mostly made with wrong info, provided by wrong people to the decision-maker(s) who typically either decides on his/her own as the boss or as a family rather than collectively with the specialists".

Similar to many companies conducting business in Turkish real estate market, Company G also does "not *invest on the land* in the pre-development stage of the project" and "mostly develops buildings according to a swap agreement reached between

the land-owner(s) and the company". Company G generally uses equity and short-term debt for the *financing* of the projects that they develop. The company believes that the "quality of a building is the key for a successful project and once a high quality building is developed on a prime location with a good design, achievement of 100% occupancy is inevitable".

Summary of Responses to the Questions 14-24

Company G speculates that there is "no real *market analysis* being performed in the Turkish real estate market, since the future in Turkish market is so unpredictable". In such an unforeseeable economy, the company believes that "one cannot predict what might happen even just in two days, let alone in two years". "The market constantly experiences various type of crises, but there isn't any reliable, publicly available information to predict it ahead of time." According to the company, "there isn't enough firms or database to make informed decisions or reasonable predictions".

Company G argues that "*market data* is typically collected and evaluated on an individual basis rather than on excel sheets; thus it is very important to stay close to the market, as it is the only way not to miss out on any information, which cannot be retrieved otherwise". The company believes that a successful office development requires the following: "understanding the targeted consumer profile, cost-effective design, sound rentable area / total construction area ratio, reasonable pricing, prime location, adequate infrastructure, effective facility program and sufficient space".

"Because of the common swap agreement practice once a land is brought to the company in search of a use by a landowner, who is mostly a non-professional, the parties

are more interested in developing a project that will hopefully be profitable, than the *market share* that their project might capture." Once they decide on a project, they are bound to start the construction in two years and finish it in five years in accordance with the regulations, even if the circumstances turn out to be unfavorable. Company G doesn't use many *marketability strategies*, as it believes that "there are not any quality real estate agents that can foresee the process". "Pre-leasing is still not a common practice in Turkey." "Quality, reputation of the company and reasonable prices" are the issues that the company believes that sell the building.

Summary of Responses to the Questions 25-30

Similar to many of the other companies, Company G also feels pretty "confident about the accurateness of its *project cost* estimations" and predicts them being "between $300 - $400 per square meter", without much margin of error. The company argues that, "since the Turkish market is currently a consumer-driven, buyer market, most of the calculations are not based on what the developer expects to get but what the developer might receive if the consumers demand the project".

Company G states that they do "not use many of the *key financial ratios*" and argues that even the calculations that they do are not as accurate since they are "based on common estimates, rather than real data". The company considers "eight years and/or 100 months" as an acceptable *payback period*. However, if they decide to sell the project in advance, to make the deal attractive to an investor, they offer the investor a price that is equal to a six-year payback period, and use the money to finance the project.

M Construction Co.

Company Description

Company M's parent company was founded in 1940s to operate in textiles industry. In the forth-coming years, the founders dedicated themselves to invest in various manufacturing and services sectors with great ambition for information, quality and credibility. "Since its establishment, the parent company has successfully served in sectors like soap and glycerin production, pharmaceutical production, tool production, real estate investment and development, construction and tourism services." Company M's parent company "entered into the real estate investment and development market in 1970s". "This was a period of significant economic growth in Turkey and rapidly developing industry resulted in migration of population to big cities, especially to Istanbul." The parent company has foreseen this development process as an opportunity for new investments and employed all its strength and financial resources, gained in the industry and trade, to real estate development and construction. Hitherto, with the high quality and professional understanding, Company M has developed "numerous residential, commercial, retail and tourism projects with total construction area, over 600,000 m²". Company M has "a real estate portfolio consisting of office (all seven in the European side of Istanbul; Mecidiyekoy, Levent, Etiler), shopping complexes and plots of land". Company M, which grew with the importance given to high quality and credibility, has gathered all the companies under one roof in 1999. With a total of approximately 600,000m² of prestigious projects completed, Company M has "a strong reputation in the sector with its high quality and high standard works".

Summary of Responses to the Questions 1-13

Company M's specific *goals and objectives* while developing real estate projects are "profitability, prestige and intensifying the already strong "brand" name / reputation of the company". Company M does not have a *formalized decision-making model*, since it argues that each project is unique. The company chooses to evaluate "*the need for a particular development project* on an individual demand basis", when a project or land is brought to its attention. Thus it is not their policy to go out searching for opportunities. Once a project opportunity, mostly in form of a land –as a direct sale or swap agreement option–, presents itself the company assesses "the marketability of the project to see whether they can sell the units once the project is completed".

Since the land is generally presented to the company with an idea, to check the *appropriateness* of this already generated idea, Company M first requires all the legal documents that the landowner might have. Next, legal department prepares a due diligence report investigating any legal problems and/or restrictions concerning the subject land from municipalities. If the result is favorable, upper level management pays a visit to the site. The most important criterion considered for a *go-decision* is the location of the site, since the company is "only interested in the prime locations". If the decision is still a go, project development group prepares a project feasibility analysis within the legal limits of the site, while the marketing group determines the marketability of the project on that particular site. After careful analysis of these two reports, the board of the company makes the final *go/no-go decision*.

"Mediocre location, legal problems about the land, inferior neighborhood characteristics, poor development probability of the site and small-scale sites and/or projects are some of the factors" that might lead to a *no-go decision*. Similar to other firms, Company M also does not begin to *commit extensive resources* to the project up until the construction phase. Company M typically *finances* its development projects via equity financing. However, in case of a swap agreement they either "split the building physically", or "share the profit from the sales at the end". "Legal group, project development group and marketing group" are the *major players involved* in the pre-development stage.

Summary of Responses to the Questions 14-24

Company M does not consider "*analyzing the market and its development trends* as its job". However, they still keep their eyes and ears open all the time, to decide what sells and what does not sell on a particular location. The company does "not analyze the *macro market*" either. While *segmenting the market*, Company M uses income level analysis and only targets "top quality tenants". Similarly, while identifying their *consumer profile*, the company targets highest quality tenants. They also have a high confidence on the fact that "(their) consumers believe it is safe and profitable to invest in their projects". The Company tracks the *current and future competition* and includes these factors into their comparative rent analysis and price determination process. Company M also follows the *existing and future office supply* from the various real estate consultant company reports. The *in-house staff* handles the market analysis.

Recently, the company puts “more emphasis on the market analysis, as the competition in the market gets stiffer, and differentiation gains more importance to attract tenants”. Company M argues that “prior to the economic crises real estate market enjoyed some unbelievably high prices, and it was not hard to sell quality real estate”. “However in today’s real estate market, since alternative investment options and unique projects offered to investors have significantly increased in number, attracting tenants has become more challenging than before.”

Company M was “the first to build a high-rise office building in Turkey”, and thus considers itself as the leader of the sector. That is how it attracts “high-quality tenants without even any need for marketing the project out of (its) own client base”. If one, who is out of the original client base, wants to buy / rent a unit, Company M runs “a reference check on this person to make sure that the new client will be compatible with its existing client base”. The company does not feel the need to assess the *market share* that the project might capture, as “its prestigious reputation has been enough to achieve high profits” from any projects that they have developed till now.

Summary of Responses to the Questions 25-30

While determining the price of a unit, the company includes *project cost*, land cost and financing cost, if applicable, with a certain level of safety and profit margin. Company M calculates the *net present value* of a project using the dollar currency as the basis. *Key financial ratios* that the company uses while checking the feasibility of the projects are “NPV, IRR, and payback period”. The company also admits that “none of the key financial ratios are being analyzed in depth”. *Sensitivity analysis* with different

scenarios is applied to each idea. Following factors are considered to be the most effective on the feasibility analysis of a project: “lease versus sale decision, length of the construction period, and marketing strategies”.

General *payback periods* that the company faced in the past were “approximately 10 years”. However, the company argues that recently “because of the economic crises even 16 years might be considered acceptable depending on the project and its *expected property value* once completed”. Currently, Company M enjoys a 100% occupancy rate.

T Construction Co.

Company Description

Comprising over 40 companies, the parent company of Company T is “one of Turkey's leading, blue chip conglomerates, with steady growth since its foundation in 1956 and strong investments in various important industries including construction, agri-industry, finance and real estate development”. Company T, (the real estate development group of the parent company), was set up to “utilize lands and properties held by the group as well as other third parties and to develop them into viable real estate projects”. Formally established as a separate group in the parent company in the year 2000, Company T represents a new, significant business focus. Company T, which has an “EN ISO9001: 2000 certificate in the fields of project development, design, management, construction, marketing and sale, has determined its quality policy as understanding its customers' expectations, manufacturing according to the specifications and standards, and approaching perfection”.

Currently Company T is actively developing three major projects on properties owned by the parent company: an office complex, Company T Tower (in the European side of Istanbul; Levent, Buyukdere Caddesi), and two residences.

Summary of Responses to the Questions 1-13

Company T has the following *goals and objectives* while developing a real estate project: “to create prestigious and profitable projects, to generate positive cash flow and to achieve short payback periods”. The company’s *formalized decision-making model* is as follows: “First, there is the search for potential projects. Next, highest and best use analyses, which also include initial feasibility analyses, are studied for these potential projects. Many fail to produce favorable results. However, if any of the analyses produce a favorable result, then it is a *go-decision* for that idea.”

While *assessing the need* for an office development project, the Company primarily evaluates “the employment change in the market”. If there is an increase they believe that whatever they build will be sold. However, if the market is stagnant, in other words there is zero growth, then Company T considers only custom-built type of designs. General rules of thumb while *assessing the appropriateness of the idea* are: “prime location, adequate floor sizes (over 1,000 m2) for high-quality tenants, appropriateness of the land and its surroundings”.

The Company believes that “in the real estate market, a company should be pretty conservative and should be able to make a *no-go decision* rather easily, as it is very easy to shake the business”. The company defines “due diligence problems” as “the most obvious and quick deal breakers among others”. The company typically prefers not

to *commit extensive resources* to the idea in the pre-development stage. However, for the last three projects they decided to purchase the land in the pre-development stage, just because they believe that “even though the project fails to go through, the land will cost a lot more than the purchase price”.

Like most of the other companies, Company T also prefers to use equity to *finance* its projects. It mostly uses “foreign export credit for the construction materials used and (is in a position of securing) long-term credit if needed because of its strong reputation”. The major players involved in the predevelopment stage are “real estate development group, marketing group (out-sourced) and resource development group”.

“A positive cash flow analysis that generates an IRR higher than 25%” is considered to be a convincing result of a *project’s feasibility*. In swap agreements, Company T generally prefers to “share the profit instead of actually splitting the building physically”. The company argues that they do “not need to *convince other participants and/or shareholders* of the viability of the project, as they already trust that their money will turn back once they invest with Company T”.

Summary of Responses to the Questions 14-24

The Company follows the *market and its development trends* from the quarterly reports of the real estate consultant firms. They do not feel the need to analyze the *macro market*. Company T feels that especially “office market is already distinctly *segmented* in Istanbul”. They *identify* “high-quality firms”, which can overcome any likely economic crises, as their tenants.

Company T argues that “Istanbul real estate market is an easy to follow market, mostly because of its small scale and clearly defined structure”. That is why they don’t feel that they need to do much to follow the market. They follow the *current and potential future competition* from the quarterly reports of the real estate consultants. *Site selection* is also believed to be pretty easy as “there are already defined locations that certain sectors would like to be at”. Currently, because of the economic situation, the company selects to “only develop build-to-suit type office projects”.

While *identifying the existing and future office supply*, Company T uses “economic indicators, and foreign capital entry trends” as major factors. The company feels confident that “once they decide to develop a project they will achieve a 100% occupancy”, which basically means that the *market-share* their project might capture will be their project’s construction area divided by the total available constructed space.

Summary of Responses to the Questions 25-30

Company T argues that since they are originally a construction company they do not experience any problems while “correctly estimating the *project’s cost*”. They use 8% discount rate while estimating the *probable cash flow* that the project will generate. The company claims to “use all of the *key financial ratios* except the operating expense ratio”, as they do “not see any risk involved in that area because of the triple-net lease terms being applied”. However, the company also believes that “to have more accurate calculations there is a need for a stabilized economy”.

While estimating the *expected property value*, Company T does not evaluate average values of other projects, as they believe that “there are no same caliber projects

in the market". Thus, they argue that "if the project's cost plus projected revenues including future interest rates seem to be larger than the total of land, construction and financial cost, then one can conclude that it is a feasible investment". "Ten years" is considered to be an acceptable *payback period* and they expect 100% occupancy in four months for their newly built Class A office project, which is currently 12% vacant.

Ih REIC

Company Description

Company Ih, headquartered in Istanbul, was founded in December 1997 with an initial capital of 2 trillion Turkish Liras. "Main scope of activity of the company, within the frame set by legislation of Capital Markets Board for real estate investment trusts, is to invest in real estate, real estate projects, real estate backed rights, real estate backed capital market instruments and capital markets." The company has developed one office project in Uskudar (on the Asian side).

Summary of Responses to the Questions 1-13

Specific goals and objectives defined by Company Ih are "project profitability, short payback period, low project risk, and a positive impact on the company's prestige". The company does not have a *formalized decision-making model*. The *need for a particular project* is primarily followed by periodic market and feasibility analyses that the company requires from various real estate consultant firms. Market analysis is typically outsourced to a real estate consultant firm. While *assessing the appropriateness* of an idea the company first analyzes "the project's potential demand and risk". "Next, project's initial cost and sale projections are calculated. If the net cash flow analysis and

the expected project profitability are satisfactory, a more detailed feasibility analysis is carried out by the in-house staff."

To make a *go-decision*, Company Ih requires "the feasibility analysis of the project to be higher than the current interest rates and alternative investment options". The criteria used while making a *go-decision* are "favorable IRR and NPV figures, short payback period, a certain level of positive cash flow". In contrast, criteria for a *no-go decision* are "unfavorable IRR and NPV figures, long payback periods, a lower level of net cash flow, and/or probability of an insufficient demand due to a change in the development trends".

The company begins to *commit extensive resources* to the project "only after the construction permits are secured from the associated municipalities". Company Ih prefers to use equity to *finance* its development projects. "It mostly uses the advantages of being a REIT and offers its shares to the public to raise capital for the project. Once the project is completed, the company pays back to the investors by either cash or share options of the company." Company Ih also gets construction loan when necessary.

The *major players* involved in the pre-development stage are "the landowner or (his/her) representative, consultants, architects, and the managers of the finance and accounting departments of the company". Results like "sufficient demand, positive highest & best use analysis, and favorable IRR and NPV figures" are used to decide on the *feasibility of a project*. Once the company decides to go on with a project, additional reports from different consultant companies are requested to demonstrate the viability of the project to other participants / shareholders.

Summary of Responses to the Questions 14-24

"Sector-related publications, periodic reports from consultant companies and the information gathered during the analyses of potential projects" are used as tools while keeping track of the *market and its development trends*. Being direct indicators of the general economic trends factors like "detailed stock exchange and bond data, interest rates, and currency rates" are monitored daily and used to analyze the *macro market* with regard to the demand changes for different type of real estate.

Company Ih evaluates "occupancy rates, absorption rate, rental rates/m^2, current and potential office projects in and out of the CBD" while determining and *segmenting the market*. "Demographic trends of a region and its current tenant profile" are used to identify the consumer profile of a project. Absorption rate and average demand rate analysis are used for analyzing the *current competition* and *identifying the potential for future competition*.

While *selecting a site*, the company believes that "there is not many options left in the CBD" and it also finds it "very risky to develop out of the CBD". That is why Company Ih sticks with just analyzing the projects that is brought to it by either landowners or real estate consultants instead of looking for investment opportunities. Indicators like "the occupancy rates of the current buildings, population increase rate, new company openings, and economic development trends" are used to identify the potential *office demand* for future. *Existing and future office supply* information is gathered from the quarterly consultant reports.

The *market-share* that the project might capture is calculated by “evaluating the current and future absorption rate of the office stock, and with the assumption that the project will be 100% occupied”. *Marketability strategies* that the company uses change depending on the project, however typically Company Ih tries to select “the most appropriate media for the targeted market of the subject project”. For office projects the company mostly uses the periodicals that are being published in the subject sector.

Summary of Responses to the Questions 25-30

A subsidiary construction company of Company Ih handles the detailed *cost* analyses of the projects. The company uses discounted *cash flow analysis* as the basis for the estimates, and periodically updates these calculations. The key financial ratios that Company Ih uses to check the feasibility of the projects are as follows: “IRR, ROE, ROI, NPV, and payback period”. Company Ih uses “property value times discount and/or premium ratios” as the formula while estimating the expected property value. Till now the company has “developed one office project and sold it entirely on a unit-by-unit basis”. The *payback period* for that project was 2.5 years.

A REIC

Company Description

Company A was “established in July 1996 by transforming an already existing company founded in 1978 to a real estate investment company”. “The first transaction of Company A was to sell a 37,000 m² building, whose rough construction work was completed, and put this sum as the capital for the new company.” Following this first transaction, the company continued its activities by investing in projects developed by

the previous company as well as by taking over and leasing real estate belonging to the parent company and its subsidiaries and obtaining rental revenues. Company A was the "first to develop office buildings in Maslak area in 1977". The company has developed "more than eight office buildings, mostly on the European side of Istanbul (Maslak, Karakoy, Sishane)", however "currently has only three of these in its portfolio (two in Istanbul and one in Ankara)".

Summary of Responses to the Questions 1-13

Company A's *main objective* is developing "speculative projects that will create demand in the near future, even though the market might not be ready for such a project at the time the development is first initiated". The company has full confidence in taking such a "risk by creating a project that does not have the demand at the time, because of its well-known reputation". Company A argues that "due to the immense trust the investors have for the company's name they will not have any problem investing in its projects, knowing that they will enjoy a continuous return for many years to come". Thus, the company also does "not feel the need to *convince other participants / shareholders*".

The company does "not have a *formalized decision-making model*". For the company the most important factor in office development is "the land availability in a profitable area". When such a land becomes available, the company first identifies the standardized rental rates, occupancy rates and the current demand towards the competitive buildings in the neighborhood. Company A bases its *go-decision* to these

standardized rates. If the potential IRR and NPV calculations are found to be favorable, the company proceeds with the idea.

According to Company A “only variable in determining a company’s profitability is the land price, as all the other factors like rental revenue and construction cost are similar”. Thus, “a reasonable land price at a prime location is the major criteria” used to make a *go-decision*. “After the land price is determined expected payback period becomes an important component of the feasibility analysis, mostly because of the high investment risk of Turkey.” *Sensitivity analysis*, including worst / normal / best case scenarios, are used for analyzing the project risk.

Along the analysis process, “unforeseen risks that are realized by the board of the company, a payback period longer than seven years, and an IRR that is less than 13% - 14%” are considered as causes for a *no-go decision*. Company A prefers to *finance* its projects via company equity. The major players involved in the pre-development stage are “personnel of the REIT, contractor group, financial department, the boards of the REIT and the Holding”.

Summary of Responses to the Questions 14-24

Company A has an *in-house* research team that is “constantly following the market, its *development trends* and available land opportunities”. The company limits its analysis with Istanbul real estate market. Company A argues that “Istanbul market is already distinctly *segmented* into various clusters and *consumer profiles* are all pre-determined for these segments, which makes it easier to analyze the market in a shorter time”.

The company is “in a continual search for *land* that would generate a higher profit from its NPV and IRR projections than its actual cost”. While evaluating the *market-share that the project might capture*, the company claims that “credibility of a company” is very important. They further argue that once they decide to go on with a project, “the market anticipates that the company has already evaluated all the pros and cons regarding the project and the project will be a profitable one to invest in”.

Summary of Responses to the Questions 25-30

The *key financial ratios* that the company uses to check the feasibility of the project are primarily “NPV and IRR” among others. Company A considers “6-7 years” as an acceptable *payback period*. The company prefers to “sell the buildings once they are completed” instead of holding them for rental revenue.

N REIC

Company Description

Company N, being the core business of its parent company –one of the leading manufacturing giants of Turkey– was founded in 1966 to act as a general contractor with its head office in Ankara. “By the help of successful and reformist strategies executed by the company executives, the concepts of coercing the conditions to progress continuously and carrying the current leading quality level to a higher point are embraced as the core principles, while trying not to ignore improvements but to create the improvements.” “Some of the major projects are Bahcesehir Satellite Town, Toprakkale-Iskenderun Motorway, Kurtun Dam and HEPP, Istanbul Metropolitan Municipality Solid Waste Facilities, Istanbul Metro System, Black Sea Motorway,

Company N's Plaza (in Maslak area) and Istanbul Metro Bosphorus Tube Tunnel Crossing (MARMARAY)." Despite the economical crisis faced in the first years of 21st century, Company N continued to expand its activity range, which reached up to 13 countries. "In 2004, the system including all company activities was certified for ISO 9001, ISO 9001:2000, ISO 14001:1996 and OHSAS 18001:1999 standards and is considered to be the locomotive of the sector."

Summary of Responses to the Questions 1-13

Company N has three main *goals and objectives* while developing a real estate project: "profitability, marketability and feasibility of the investment". Since land is scarce in Istanbul, the company is constantly in search of a land option. However, it is not company policy to go and look for a suitable site. Company N usually waits for consultant firms or real estate agents to bring the land options. "Once such a land becomes available, idea generation process begins and a land use analysis is applied." Next, the company contacts the landowner to obtain a land option. If the response is positive, Company N reviews all the related calculations this time going backwards through the decision process to make the final *go-decision*, and if the results are proved to be favorable the company buys the land.

Criterion used to make a final go-decision is "a reasonable expectation of an adequate IRR that depends on the financing and the structure of the capital investment of the project". A *no-go decision* is made if the analyses show unprofitable results. Company N typically *finances* its projects through equity and international credit that is longer than one year and one week.

The *major players* in the predevelopment stage are “financial department, environmentalists, architects, engineers, and the board of the company”. Since Company N is a family-owned company “the last word regarding a go / no-go decision belongs to the boss”. The company claims that it does not need to *convince* the creditors of the viability of the project, since “the credit is given to the name and / or reputation of the parent company”.

Summary of Responses to the Questions 14-24

Company N prefers to “identify a more generic *consumer profile* that would include most of the potential customers”, since the company considers “targeting a smaller portion rather risky in an unstable economy like Turkey’s”. Current trend information, *current competition* and the potential for *future competition* are typically obtained from independent real estate consultants.

The company chooses from the *site* options that are brought by the consultant firms and real estate agents. Company N obtains *office demand*, *existing* and *future office supply* data also from the individual real estate consultants thorough the market analyses that they prepare. The company does “not assess the *market-share* that its projects might capture”. Company N admits that although they do “not have any problems in producing high-quality end products”, they are “experiencing difficulty on the marketing side”. Because of the lessons learnt from previous experiences, the company recently values “figuring out the *marketing strategy* before a *go-decision* is made”. Currently, they *outsource* the marketing of the project to the independent consultant firms that also help with the market analysis.

Summary of Responses to the Questions 25-30

The general contracting department of the company handles the project cost estimation. While estimating the *probable cash flow* that the project will generate "worst-case scenario" is used as the basis. The company always includes "a certain safety margin against unforeseen problems that might occur before the development is completed". Company N claims to be using all the *key financial ratios* applicable. The company also calculates the *expected property value*, and double-checks it with the reports that it requests from accredited appraisal firms.

Expected *payback period* for the office building that they have developed is "10-15 years". They find this reasonable considering that they are "renting the place, not selling it". Currently, the *vacancy rate* for the same building is 37%. Company N argues that currently in Turkey, "firms are more inclined to own an office space than leasing it".

I REIC

Company Description

"With a portfolio of nearly 200,000m^2 (GLA – gross leasable area) of Turkey's top properties (three office developments in the European side of Istanbul; Levent, Etiler, Zincirlikuyu, one office building in Ankara) and an additional 72,636m^2 of land under development", Company I is focused on "creating a dynamic, sustainable, and professional property market in Turkey through a vehicle that offers investors the best returns at the lowest possible risk". Company I is primarily involved in the investment and developing of real estate projects in Turkey. With a diversified portfolio containing many of Turkey's top properties, Company I has focused its energy on "leading the pace

of change in the Turkish property market". Company I is "the clear leader in Turkey's real estate investment sector, both in terms of its portfolio value and its market capitalization". Company I has access to "the extensive financial resources, expertise, and support" of its parent company. Company I' s parent company is the Turkey's largest financial institution, and one of the country's largest and most trusted companies. Looking at Company I' s portfolio, "it is clear to see that it showed a rapid growth stage since it started its operations". With a policy of financing acquisitions through the public market, it is a debt free company. Company I' s long- term approach is to "focus on unlocking the value of its current assets and maximizing its investment returns".

Summary of Responses to the Questions 1-13

Company I claims that they have a unique approach to the real estate development, as they look at the process as "a long-term investment rather than a short-term, high-risk, high-return process" as most of the other companies do. Thus, they are willing to "accept longer payback periods with lower risk". The company is mostly interested in "taking very unique properties in the market that have either very attractive existing cash flows or in many cases appealing development potential over the long term". Company I does "not only focus on the general cash flow generation potential of a project but also its underlined capital appreciation potential". The company's primary interests are towards "hotels, entertainment facilities, Class A office buildings, and shopping centers" at good locations. The company has "a *formalized decision-making model*" that they use while developing real estate projects.

While assessing *the need for a particular development project*, they request various independent market analyses in addition to their own in-house evaluation. The specific evaluation criteria for the *appropriateness of an idea* are “suitability of the location, quality of the space, design and use, differentiation among others, and uniqueness of the idea”. Within the company, “a *go-decision* can be made only by the anonymous vote of the board that consists of at least 30% independent board members”. Criteria used to make a *go-decision* are: “favorable due diligence, positive investment potential, and the board approval”. The company claims that they would not go on with a project unless they feel that there is a “very strong potential of attracting top-quality tenants into that project”.

The company starts to *commit extensive resources* to the project once they visit the site, do a project feasibility analysis, present it to the board and get a *go-decision* for the particular project. Company I is “a conservative company that tries to be as risk-free as possible”, and use *equity* while financing its development projects. The *major players* involved in the pre-development stage of the office development projects are “project development investment team, the marketing team and the board”.

To be *convinced of a project’s feasibility*, the company requires “at least a 10% IRR”. To *convince other participants / shareholders* of the viability of the project Company I uses “a certain penetration process”, as they call it, which means that “going into more and more detail as a question or a concern arises”. “This process continues till all the questions/ concerns are revisited, reinvestigated and everybody is satisfied that the investment decision is right.”

Summary of Responses to the Questions 14-24

While analyzing the *market and its development trends*, the company uses various independent real estate consultant firms. However, they also have an *in-house* research team that does its own research, which is later on used with the others to make a final go / no-go decision. The company only accepts "high-quality clients as tenants", as they want their tenants "to be able to handle any economic volatility" that might come up during their lease period "for uninterrupted rental revenue generation". The company has "a quite comprehensive risk profiling system" that they apply before accepting a company as a tenant. However, the company also tries to "minimize risk by diversifying its tenant mix / *consumer profile*, so that it is not only exposed to a single market sector".

Company I constantly analyzes the *current competition* and *potential for future competition* trying to "forecast with what sector it should get involved in". Because the company has a very powerful financial institution as a parent company, it also enjoys "an access to one of the largest reserve-of-land portfolio". Thus, the company is not just looking for *land* options in Istanbul, but all around Turkey. Yet, Company I does "not believe in buying a land just for its capital appreciation potential".

Constant in-house research team analyses and various independent consultant reports are used to follow change in the office demand, and the existing and future office supply. The company claims to have "a certain idea of the possible market-share that its projects might capture". They have "an expectation of how many customers they are going to get for the first year", which they base to the market comparability analysis.

Company I is working with “the world’s number one branding company” to form and execute its marketing strategies.

Summary of Responses to the Questions 25-30

While estimating the *project’s cost,* the company argues that there are already “well-established benchmarks” in the market. As a company, they generally claim to be assuming “the worst-case scenario” and than try to bring down the cost to come to their expectations, or to the most realistic market value. Company I finds “*the cash-on-cash return ratio* very crucial” if it plans to keep the property in its portfolio. Since the company does not use debt, it does “not consider debt service coverage ratio as an issue”. The company also includes IRR and NPV calculations in their decisions.

Company I considers “a 10-year” *payback period* as acceptable. However, they also argue that if they include the resale value they can push the acceptable level down to seven years. The company claims that even during the crises period, they have “never experienced a *vacancy rate* higher than 10%”, and currently they have a “0%” vacancy in all its estates.

YK REIC

Company Description

With an experienced, dynamic management team, Company YK, “one of the leading real estate investment companies in Turkey”, has great potential for growth “enabling it to undertake large-scale, distinctive real estate projects”. A blending of two of the top names in their respective business areas, Company YK was “established in December 1996 by a financial institution (26%) and a general contracting company

(25%)". The Company YK went public in June 1998 with a free float of 49%; currently its stock is listed and traded on the Istanbul Stock Exchange (ISE). Built on the vast experience of its parent companies, Company YK has had "a number of major accomplishments in the Turkish real estate investment market". "Phase I of the Company's first project, 'Istanbul Istanbul' (a large-scale residential project), was completed in 2001 with all units sold and delivered to their owners. Phase II of the project was completed and key deliveries were made by March 2003. Many units of this project were sold prior to completion of the construction."

Company YK's *main goal* is "accurate analysis of market expectations and development of globally unique projects". In close touch with international real estate markets, Company YK endeavors to "perceive market trends that meet customer needs while maintaining effective communications with existing and potential customers". The Company YK strives to "develop functional projects", which also meet their own high standards.

In addition to its real estate portfolio and portfolio management duties, Company YK also plays "a significant role in the project development side of the sector". The Company YK' s capacity to create new concepts and turn them into brand names will strengthen its position in the sector and create more demand for its future projects. Company YK remains committed to "(its) strategy of developing turnkey projects that actualize its original concepts". Company YK' s current investment portfolio includes "ten floors at the (Company YK's) Plaza with office space totaling 9,720 m2, one remaining unit at the 'Istanbul Istanbul' project and six units at Kemer Country".

Currently the Company has leased “five units at the Elit Residence as well as the Riva (residential) and Narmanli Projects (office)”. “By maintaining a balanced portfolio of residential and business complexes and earning revenue equally from development projects and rentals”, Company YK aims to maintain its market lead also in the future.

Summary of Responses to the Questions 1-13

Company YK defines “profitability, creating value for its shareholders and an IRR that is higher than 15% - 16%” as its *specific goals and objectives* while developing a real estate project. The company criticizes “the shortage of data and resource in Turkey, arguing that it is not easy to know who did what for how much”. “The real prices are typically left undisclosed.” However the company still tries to get to the truth with its periodically revised regional market analyses. Company YK is “constantly looking for an investment opportunity”.

While assessing *the need for a particular development project*, the company first analyzes the change in population and total employment. Next, come the economic base analysis, structure of the multinational firms, and current supply and its specifications. It is the company policy to immediately drop any project that has due diligence problems. Company YK “either purchases the land in advance or makes a swap agreement in exchange of the land”. The company prefers to “share profit instead of splitting the building physically”. If they decide on a swap agreement, since they don’t pay for the land, they “*commit* to just 10% - 15% of the total project cost, which includes the cost of project design and the pre-marketing studies”. However, if they decide to buy the land they would be “*committing* to 20% of the total project cost” in the pre-development

stage of the process. The company uses equity *financing* for its projects. The major players involved in the pre-development stage are “the project development department, department managers, and the board”.

Summary of Responses to the Questions 14-24

Company YK claims that they analyze “both *the macro and the micro market*”. The company prefers to develop projects that have “income generation capability for the long-term”. They are “not interested in just developing offices and selling them for profit”, or in other words, with quick returns. Company YK also believes that it is “important to know how to transform the product for the changing environment, if and when a particular consumer group is impacted by an economic crisis”. The company uses “both *in-house* research team and various consultants” for data like current and possible future competition, office demand, existing, and future office supply to be used in market analysis. However, they “mostly trust their own analyses”.

The company argues that if they decide to develop a project they will do “the best and attract/relocate everybody”. Thus, they do “not believe that capture rates or absorption rates really apply” to their company. The most important ratio for Company YK is IRR. The company claims that it creates value by “considering today’s conditions combined with future trends and standards”, which the company follows closely with the help of its international consultants. Company YK gives the “priority to pre-leasing, which is achieved by correctly identifying consumer requirements and exceeding the consumer expectations”. The company generally targets a 100% pre-lease. However, it is mostly “hard to achieve in the current Turkish market”.

Summary of Responses to the Questions 25-30

Company YK is confident that “the margin of error in its calculations, especially in the *project cost* and *probable cash flow* estimates, is no more than 10%”. The company applies *scenario analysis*, but is “not using the best-case scenario anymore considering the current Turkish economy”. “The worst-case scenarios typically include problems regarding: change in income levels, cost increases, problematic marketing procedures, considerations about not being able to sell / rent certain number of units in a pre-determined period.”

The company considers “competition assessment and comparative rental analysis” as very important factors while checking the *feasibility* of a project. “Partnership is believed to be an option if a project is too risky.” The company finds a “25% IRR” and “eight years” of a *payback period* acceptable. Company YK criticizes the fact that there is “no standardization or guarantee for anything in the Turkish real estate market”.

The company further argues that “one can purchase a land and its title use might be changed the next day without that person’s knowledge or right of say on the issue”. The company claims that there are “serious problems with the ownership laws”. “Unfair competition” is also identified as another important problem in Turkey, “mostly caused by some contractors that are not transparent in their business dealings, as REITs are obligated to be, enabling them to lower their price”.

VITA

Ms. Isilay Civan was born in Ankara, in 1976. She attended Kadikoy Anatolian High School from 1987 to 1994 and graduated with honors. In 1994, she was accepted to Istanbul Technical University, where she earned her B.Arch. degree in architecture and M.S. degree in construction project management. In the first year of her master's program, she was also hired as a teaching and research assistant and started teaching at the same university. After earning her M.S. degree, she decided to continue her education and enrolled in the doctoral program in construction with the intention of studying facilities management. In her first year, she completed all the required coursework for the program with a 4.0 GPA. In the meantime, she was accepted to a Ph.D. program in architecture at Texas A&M University with a graduate fellowship in 2001 and started studying on her second Ph.D. with an emphasis on real estate development and management. During her study at Texas A&M University, she fulfilled the requirements of two certificate programs, namely the business certificate from the Mays School of Business, and the facilities management certificate from the College of Architecture. She defended her Ph.D. at Istanbul Technical University in August 2006. She received her Ph.D. from Texas A&M University in May 2007. Her permanent address is as follows: Goksu evleri, Kartopu caddesi, B221a, Anadolu Hisari, Istanbul / Turkey.