

PREACT 549

RESIDENTIAL REAL ESTATE DEVELOPER'S MANUAL

How to Present Your Project so the
Bank Will Make You a Loan



With the help of the United States Agency for International Development

URBAN INSTITUTE ■ MRI ■ KOLPRON ■ PADCO

Summer 1999

1

Residential Real Estate Developer's Manual

How to Present Your Project so the Bank Will Make
You a Loan

URBAN INSTITUTE — MRI — KOLPRON — PADCO

With the help of the United States Agency for International Development

Preface

Real estate developers involved in housing construction usually have to cope with three main difficulties during the process of development. First, they have to make sure that they are working on a successful project that will come to the market at the right time. Second, they have to convince others, especially banks originating construction loans, that their ideas are good so that the banks will be persuaded to invest their money in the project. Third, they must put their ideas into practice and sell the product at a good price and at the right time. In the end, the developer must make a reasonable profit.

This manual has been prepared with the support of the United States Agency for International Development (USAID) in cooperation with Hungarian and American experts. The manual aims to show developers how to present the concept of their projects in a logical format that will convince a financier to grant them a loan. The formal requirements of different banks vary. Therefore, this manual does not aim to provide help in the actual wording of the loan application, but shows how the information the developer needs for a housing construction loan can be acquired, analyzed and documented.

This manual was prepared with materials provided by Pál Baross (KOLPRON Budapest Kft.), Frank Piatkowski (Charles E. Smith Companies/PADCO) and Kevin O'Brien (First Washington Associates/PADCO). Based on those materials and the literature shown in the references, the manual was written by Gábor Soóki-Tóth (KOLPRON Budapest Kft.) for the Urban Institute and the Metropolitan Research Institute.

This manual was developed from material that was used in five different classes and presented in three Hungarian cities (Budapest, Nyiregyhaza and Zalaegerszeg). Developers, bankers and local government officials attended these classes. The aim of the classes was to engage all parties in a dialogue. The developers were instructed how to present their projects so a banker could understand them. The bankers learned how to analyze these projects to make loans. Local regulators gained a better understanding of their responsibilities to stimulate the development of private housing for the residents of their cities. This developer's handbook is both a summary of these classes and a legacy from those meetings.



Funds for the production of this manual were provided by the United States Agency for International Development.

Summer 1999

Table of Contents

1 Real Estate Development Process	1
1.1 Introduction	1
1.2 The Housing Market	2
1.3 The Participants	3
2 The Project	7
2.1 The Process	7
2.2 The Developer's Task	10
2.3 Market Research	11
2.4 Demand	12
2.5 Demand Analysis	12
2.6 Supply	17
2.7 Selecting the Site	22
3 Preparing the Loan Application	27
3.1 Sources	27
3.2 Prefeasibility Analysis	27
3.3 Land Purchase Price	29
3.4 Pro-Forma Analysis	33
4 Case Study	39
4.1 Market and Project Feasibility Analysis	39
4.2 Project Description	39
4.3 Demand Analysis	41
4.4 Supply Analysis	45
4.5 Development Appraisal	58

d

1 Real Estate Development Process

1.1 Introduction

Housing construction, especially when its purpose is to sell the property at the market, is, in fact, real estate development. It is a process in which the partners who take a risk have financial expectations in proportion to their risk. Everyone benefits from successful development: the developer realizes a financial profit, the neighborhood is improved and suitable flats are provided for the customers, whose housing demands are satisfied by the new building, in terms of price, quality and location.

Market risk

While the risk taken by the “investor” in the traditional sense is mainly in managing the costs, the risk for the developer is in the constant changes in the real estate market. Successful developers find opportunities while watching the market and start a project in the hope of making a profit. In this respect, real estate developers are “speculators”: At the beginning of the process, they intend to sell the property in the market, although they do not yet have a buyer for the property. However, in other respects, developers are not “speculators.” Their decisions are determined by their knowledge of the real estate market and not by irrational expectations or by their knowledge of external factors that might be expected to lead to a growth in the value of the property without any intervention.

“Other people’s money”

Real estate developers use other people’s money; their own capital in the project is small. During the development, one of the most difficult tasks for developers is acquiring the starting capital and persuading the partners to risk their capital. The developer is the only participant in the process who will lose all the money invested if the project fails, while the other participants will have some hope of reducing their risks. Real estate development requires considerable capital investment and poses serious risks. The risks and the financial expectations are obviously related. Capital investment is motivated by the possibility of making a profit by improving the market position of the property. In general, we can say that there are two basic goals underlying the entire process of real estate development, from a project’s conception to its completion:

- reducing the developer’s risks; and
- improving the quality of the project.

Reducing risk is in the interest of those who provide the financing, while improving the quality is in the interest of the end-users, the investors. Both are important for the real estate developer.

The real estate market is a local market

Some products are “worldwide” products: If they are successful, they can be reproduced and sold by the millions. Real estate, especially residential property, is not like that: It is individual, location-specific and “has to be invented again and again.” Even the same neighborhood, the same street or the same side of the street is not necessarily in the same microposition. It is no coincidence, therefore, if real estate developers stick to a part of the city they are familiar with and look there for the possibility of new projects in the long term.

You can become a real estate developer if you have at least one of the following:

- money, or capital, to invest;
- area, or property, to develop;
- a buyer you know you can do business with; and
- expertise in real estate development.

In the traditional sense, the real estate developer buys a site and selects a segment of the market based on the demand, the supply and the characteristics of the location. He or she then designs the product (the property), that is, determines the functional construction program. Later, the developer acquires the required permits, organizes financing and carries out the construction. Finally, the developer sells or leases the finished property directly to the end-users or the investors.

1.2 The Housing Market

In many respects, the housing market is similar to the market for durable consumer goods in that both may be characterized from the standpoint of supply and demand.

Demand consists of households for:

- first-time buyers;
- the “move-up” market (those buying a newer and more expensive home); and
- new residents moving to a certain region.

Supply consists of:

- new construction;
- old units left behind by the “move-up” market; and
- units that become vacant as a result of an occupant’s death.

Supply and demand are limited in quantity; therefore, prices are determined by the laws of the market, not by central regulations. Still, comparisons come to an end here,

as residential units are clearly different from other durable consumer goods because of the following characteristics.

The lifetime of a residential unit is long. The lifetime of a residential building is considerably longer than that of other durable consumer goods. The useful lifetime of a new unit is at least 50 years and, oftentimes, 80 to 100 years. Consequently, the market is determined by the existing housing stock. That is why the housing market cannot respond promptly to changes in the housing supply. As a consequence of the long lifetime, the housing stock is heterogeneous, built in different periods, with differences in price, quality and location. Accordingly, the housing market disintegrates into several local market segments. As a result, long lifetime residential units are not only consumer goods but also forms of investment.

“You have to live somewhere.” The function of residential units cannot be replaced. Residential units are one of the most important necessities in life. There will always be demand for them. The volume of the housing demand is determined not by individual consumer preferences but by the number of consumers.

Location specific. The units do not “go” to consumers, but consumers move into the units, in a specific geographic, social and economic environment. These characteristics are expressed objectively (e.g., infrastructure and provision of services, employment, natural and environmental values) and subjectively (e.g., image, social status, the perception of the quality of the environment) factors.

Supply is inflexible because of these factors, and the geographical location of consumers is determined by practical factors and emotional preferences, resulting in many regional and local market segments. The same is true for consumers: Throughout their lives, people have different needs and wishes concerning their homes, and, in certain periods of their lives, they are in different financial positions to realize these goals.

1.3 The Participants

Real estate development, as we have seen above, is a very complex activity. In Hungary, most housing construction enterprises come from the construction or development sector. The role of the developer is to manage the project from the idea to the sale. The developer receives a fixed amount for this, usually between 3% and 10% of the total costs of the development. Enterprises that are perhaps closest to the traditional developer are those involved in land development. They provide a supply of building sites that appear on the market with legal and planning restrictions placed on them.

Real estate development, as people say, is in the details: A rash decision or a piece of information not checked can stop the whole process. Developers have to be cautious and flexible at the same time. Throughout the process, the work of professionals from several fields—engineers, architects, urban planners, contractors, experts, lawyers, bankers, investors and the representatives of the authorities that issue the permits—has

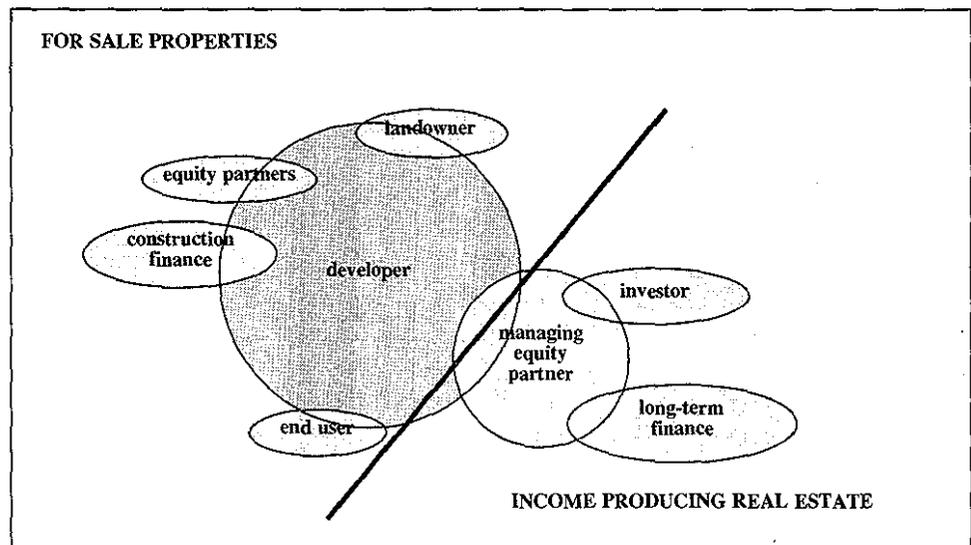
Chapter 1: Real Estate Development Process

to be coordinated. The project has to be sold to the end-users, and, in certain cases, successful communication with representatives of NGOs or residents' groups is also necessary. Of course, no one can comprehend all the details completely. Real estate developers are not only conductors but good listeners as well. They know when and to whom they should listen. The key to the success of everyday activity is solving problems continuously and, if possible, promptly.

The diagram below shows the system of relationships among the participants in the process of development. We can distinguish between two basic cases: real estate "products" intended for *direct sale* and those for *long-term utilization*. The two, of course, do not exclude each other, since people buying a unit from a real estate developer can do so with the intention of investing, leasing or perhaps expecting a future increase in the value of the property. The units built with the purpose of long-term utilization are called *income-producing property*.

In the case of property offered for sale, the interests of the developer are limited in time, lasting only until the property is sold. Income-producing property is taken to the market in two steps. First, it is leased to the end-user, and then the fully leased property is offered to the financial investors. In this case, the long-term value of the property is influenced by the organization of the operation and the quality of the project. One thing is important for developers, whether they offer the property for sale for end-users or for long-term investors: The property must fully satisfy the users' functional and location demands.

The system of relations among the participants throughout the process of real estate development



Starting capital is needed to launch the project. It may be the developer's own capital or the investment of the capital-risk partners. As the active participant, the real estate developer tries to arrive at an arrangement that ensures him the highest expected

return. In many cases, however, the passive capital partners also want to participate in the profit to the same extent as the developer because their financial risk is the same as his.

The diagram above indicates that the owner of the land is different from the developer. However, in reality, many developers own land they are planning to develop because they bought it either in anticipation of expected favorable market trends or for purely speculative purposes, not being able to resist a favorable opportunity. This, however, can be very dangerous: Experience shows that a lot of the projects that failed started with a “cheaply” acquired plot.

2 The Project

A new real estate developer has to take more risks than his more experienced competitors. His bargaining position is weaker because he cannot produce successful references to get the attention of prospective buyers or banks that originate loans. The purpose of the first projects he develops is mainly to build up references. Similar to the lending practice of banks, real estate development takes the same amount of time and energy to develop smaller projects as it does to develop larger projects. Therefore, it is a more effective use of time and energy to develop larger projects. However, this is not recommended for new enterprises: A lot depends on the size of the first project. The chances for success are higher in the case of projects that can be realized in a relatively short time and are not very expensive. A smaller building means a smaller risk. It is important that the first project be a "smooth business," an opportunity for development without special permits and modifications of the master plan.

2.1 The Process

Every development aims at satisfying the demand in the housing market. The starting point is defining the future buyers and their demands. The market research that serves as the basis of the development must provide a starting point for what is lacking in the housing market (age, size of family, financial situation, etc.) and what kinds of housing products are sought in the market. If the developer is the owner of the site as well, the starting point is defining the best possible use of the land. The developer must determine what type of housing products are possible considering the natural characteristics of the site, what the demand for them is, what competition can be expected and how many of this kind of unit are sold in a year.

Every property has its best use. Of course, over time, the best use may change. It may happen that the best possible option is to leave the site vacant, because developing it could only bring losses. If the site is given, the market research has to find the answers to four questions: What shall we build? How much shall we build? What price level can we use in our calculations? How long will it take to sell? The conditions for developing the site must be identified from the legal and the technical aspects, in addition to the market research. On the basis of these two studies, a development program can be prepared. A lot depends on the right timing. The "spare area" will gain in value as the development starts, while the land that is not being developed in the given phase can be offered as collateral to help finance the project.

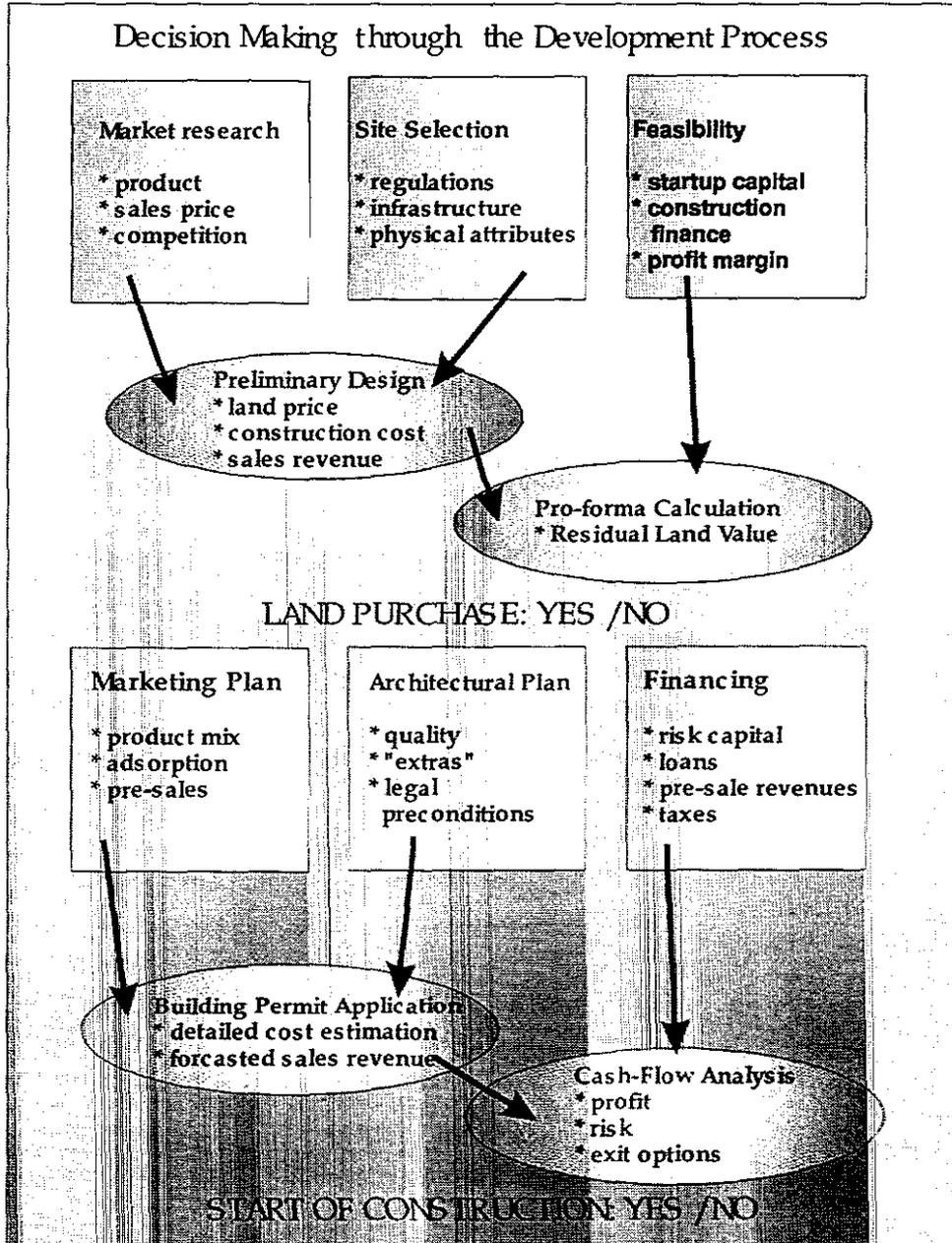
When the end-user or the targeted client group is known, the task is to define a development program and a location that will satisfy the demands of the future owner or the given market segment. In this case, a given housing product is looking for its place in the town or the city. Later, we will talk about the factors that need to be considered when selecting the location.

The chart below demonstrates the process of decision making about the project. In the first step, a decision has to be made about the selection and acquisition of the site, and in the second step, about starting the construction. The decision to be made in the second step is the more risky of the two, as most of the costs are made up of construction and financing costs.

In the two phases of the decision-making process, we look at basically the same thing, although to a different depth: the economic environment and the technical-physical aspects. Based on the market research, after considering the characteristics of the site, a draft or a concept plan can be prepared that contains enough information for the preliminary feasibility study. The aim of the financial analysis is to define the maximum price that can be paid for the site considering the expected profit of the project. Based on the financial analysis, discussions can be started and a decision can be made about the purchase of a site.

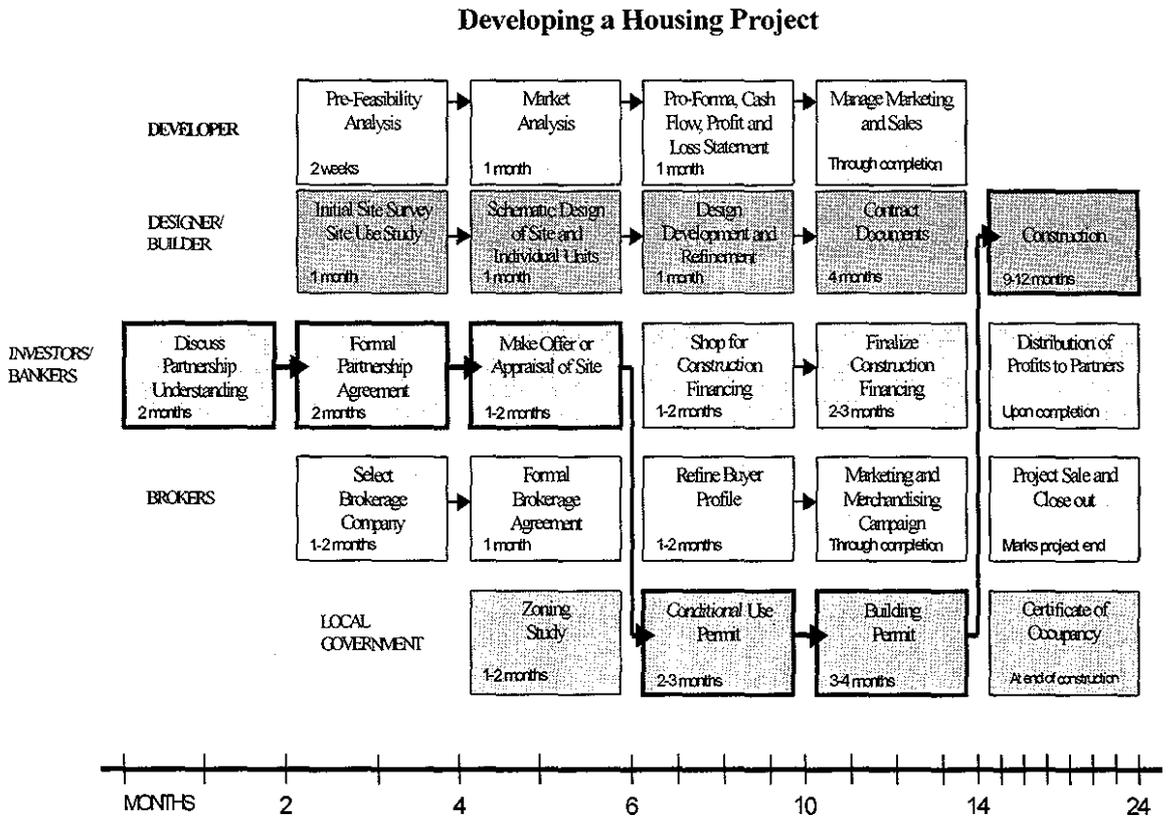
In the second phase, the details will come into the foreground. It is not enough to define what the product should be like; we should know precisely what the base area, the design and the composition of the units should be. The designer's job is to acquire the permits. The feasibility study (examining the profitability) shows the detailed cash-flow analysis, which serves as the basis of the actual loan applications. There is a difference between the depth of the study required in the two phases and this difference is not due only to the increased risks. The real estate developer must first take good care of his time (and his money as well, even though, as we have mentioned, he works mostly with "other people's money"); therefore, a relatively fast but reliable method must be applied in making the decision to purchase the site. A preliminary feasibility study can be done very quickly if the developer has a good view on the market as a whole. A more detailed analysis requires not only time but money as well. With these simple calculations, the completely hopeless cases and the locations that are worth considering more seriously can be identified with great certainty. We will come back to these calculations in detail later.

Decision making in starting real estate development



2.2 The Developer's Task

In developing a project, the developer does business with many different players. The chart below indicates the tasks that a developer may perform over the course of the 24 months that it takes to develop a typical, small project. There are five players: the developer, the designer and builder, the investors and bankers, the brokers and the local government officials. The developer leads the team, hires the professionals and interacts with all the different parties.



There are 24 tasks shown in the chart, which the developer must perform to complete the project. However, this *Development Handbook* focuses on only three tasks:

- Prefeasibility Analysis
- Market Analysis
- Pro-Forma, Cash Flow, and Profit and Loss Statement

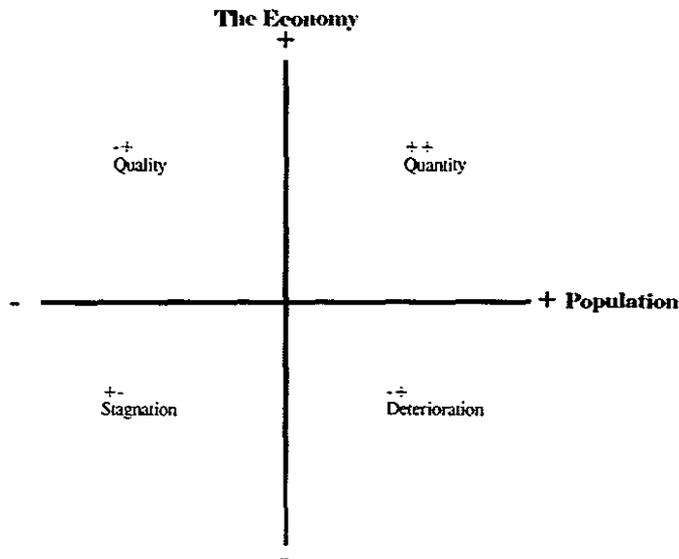
These are the tasks that a developer needs to complete to present the project to both investors and bankers. These are the tasks the developer needs to complete to get both initial capital and construction financing.

Everything that the developer does is in reaction to the market. To begin the development of a housing project, the developer must first understand the market.

2.3 Market Research

The word “marketing” is used in both Hungarian and English to describe activities related to the process of real estate development. Before starting a project, detailed market research examines the expected demand for the project. After the decision is made to purchase a site, the developer introduces the project to prospective customers and starts marketing. Finally, at the same time as the construction, sales go on in full swing. What? How many? Where? For how much? For whom? These are the questions marketing professionals ask, and the financial success of the project actually depends on how soon and how precisely these questions are answered.

From an overall perspective, the housing market is determined by current economic and demographic trends. If there is an economic boom and a growth in the population, the main factor in the market is to meet the quantity demand. If there is a decrease in the population, qualitative segmentation will come into the foreground. A decline in the economy and a decreasing population will bring about stagnation. A declining economy coupled with population growth will lead to deterioration of the housing stock. These connections are shown in the following matrix.



The first step in marketing is the market research, which means looking into the future, an educated guess. Based on the best information developers have at present, a forecast is made about expected future developments. Market research can take place at the macro and the micro level and can cover a geographical region, a city or a certain part of a city or a specific site. The targeted group of buyers, their demands (preferences)

and their purchasing power must be outlined, since the aim of the real estate developer is to satisfy the realistic demand as exactly as possible. Knowledge of the target group determines the characteristics not only of the housing product offered for sale but of the related services and the message and the form of the marketing communication as well.

The most important question is: What is the demand in the housing market? By determining demand, one can determine what tensions exist or will exist between demand and supply in the individual market segments.

2.4 Demand

The events on the demand side are determined by the population, the purchasing power and the consumers' preferences. The quantity and, in part, the quality of the housing demand are determined by demographic changes in and the number and composition of households. The crucial elements of these factors are the number of births and deaths and the migration of households. The first two—births and deaths—depend to a large extent on cultural factors in addition to numerous other factors. The third factor—migration—is mainly a function of job opportunities and the geographical location of educational institutions. The age composition of the population determines the quality of housing demand. The young generation looks for different kinds of units than do families that are more settled or senior citizens.

The number of households, which actually determines the quantity demand, is a function of the number of people in the population and the composition of the households. Several models can be used that draw on different variables (economic development, cultural factors) to estimate how different types of households are transformed (when young people move away from home, start a family, etc.).

The second most important factor in the housing market—purchasing power—can basically determine housing demand. It determines both the form of ownership sought (rental or owner-occupied property) and the price bracket.

Customer preferences are different, according to different groups, as targeted by the developer. These differences are not static in character but follow social and cultural trends in society. In countries with a developed market economy, the change in such trends, e.g., individualization, the employment of women and more flexible job opportunities, is very important. Individualization is manifested in longer periods of being single and shorter periods of being in a relationship. As a result, the composition of households is more varied. There is an increasing need for different residential environments and urban designs.

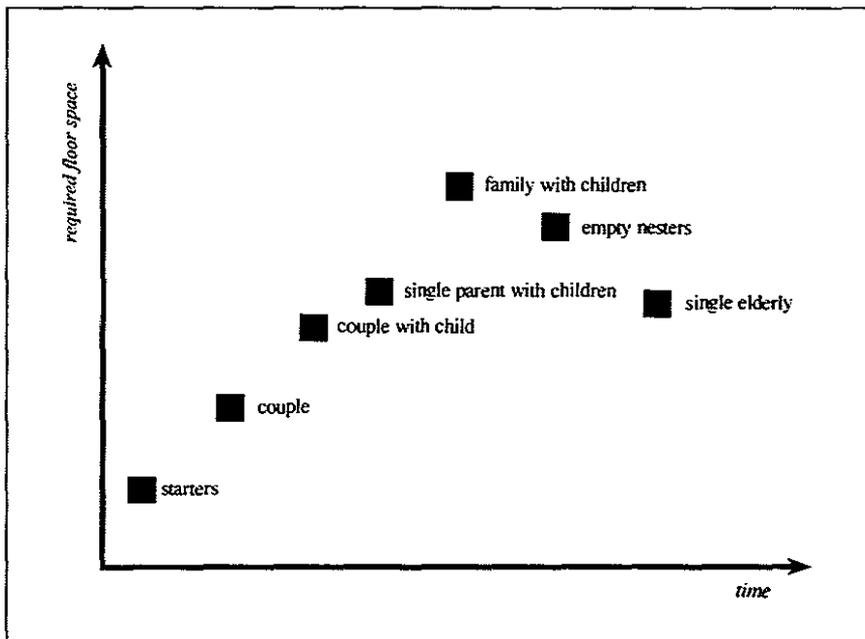
2.5 Demand Analysis

In the housing market, both the supply side (the existing stock of housing and new construction) and the demand side (households) are divided into segments.

Buyers can be grouped on the basis of:

- age;
- size of household;
- composition of household;
- income, and as a function of all these:
- way of life.

Composition and way of life for families can be attached to different stages of life, and they keep changing all the time. A simple relationship can be shown to exist between size of household and demand for a minimum size dwelling.



The income required to meet the demand for the minimum size home is rising with the passing of time. In market research, we concentrate on the demand first. The aim is to find a suitable home considering the financial capacity of the targeted household groups. Identifying demand means: determining the number of buyers in the market, what kind of units buyers are looking for, where buyers would like to buy and how much they would like to spend. There are two kinds of demand: potential and real. When identifying potential demand, we determine the preferences of prospective buyers. Real demand, on the other hand, is the number of households that will actually buy units that conform to their ideas.

In most cases, real estate developers do business with a certain group of buyers—private individuals, families and, maybe, companies or institutions. The common element among these groups is that each group member would like to buy a certain type of unit. The most important characteristics of the group that constitutes the demand are the following:

- the price members of the group are able and willing to pay for the unit;
- preferences concerning the type, quality and location of the unit;
- the average income of group members; and
- other social, demographic and economic characteristics, such as size of household, number of children and occupation of family members.

The characteristics of different groups of people looking for units can, of course, be different; it may happen that no geographical boundaries can be drawn between groups. In practice, it is enough to identify the “core” of the group to learn the characteristics of the group.

When satisfying the demand of different groups, it is important to keep in mind a few basic rules. First, the number of potential buyers for a unit decreases with an increase in price. In other words, the higher the price the potential buyer is willing to pay for a suitable unit, the smaller the given group is. This is also true the other way: The more common the preferences of a group are, the larger the group. While this general rule holds true in each case, there are “gaps” in the market at all possible price levels (where there is a demand but no supply or the supply is not adequate).

Classifying potential buyers is very important for the real estate developer, since he can successfully choose the targeted buyer group based on this classification. Classifying potential buyers are also a useful instrument for planning, marketing and advertising. One of the developer’s most important talents is to know the needs and preferences of his customers. The developer must select a marketing approach that identifies with the consumer’s needs, preferences and desires.

The classical analysis of demand takes place on two levels. On the first level, the demand for certain types of property is identified throughout the whole area of a city. Following this, the change different factors bring about in the current demand is monitored and, based on this change, a forecast of the actual demand in the market is prepared. This is important because very often different segments of the market compete with each other, and buyers with specific needs can join another group. For example, in certain cases, the demand for single-family houses can be transformed into demand for large flats in condominiums.

However, we need to remember that this example has to do with real demand, and people who know the housing market and housing prices and are aware of their housing purchasing power. Differentiating on the basis of price, quality, size and other

parameters of a unit takes place in a similar way. The crucial factor in determining the different layers of the demand is the price.

In Hungary, the most serious problem in evaluating demand is the difficulty of acquiring reliable first-hand information. Figures providing information on the housing market are available, but without the cooperation of real estate brokers experienced in selling, information on home and apartment sales is very limited. There are several methods for analyzing demand in the housing market. Let's take a brief look at them.

Assessing demand through the press

One of the most reliable sources of real estate market information is the local press. More in-depth, comprehensive information is provided in the real estate supplement of daily papers and professional real estate brokerage publications. These publications both analyze the situation in different segments of the real estate market and examine prevailing local trends in the real estate market. However, they do not pay enough attention to the demand for different types of property; they show only the supply. The real estate developer must pay attention to the information published to monitor changes in real estate prices in different parts of the city. Based on information collected in this way, one can find out about the average prices of different properties in each district, and it is possible to monitor the fluctuation of real estate prices. While processing the published information, it is possible to collect more precise information (e.g., the difference between the requested prices and the final, actual sales prices) through empirical studies (e.g., telephone surveys).

Other sources of information include real estate agencies specializing in real estate market information. In Hungary, there are several agencies that monitor the market regularly, besides conducting their daily business. These agencies can provide regular information and figures on the supply in different market segments.

Assessing the demand through public surveys

The most general method of assessing demand is with sociological samples. However, such a survey can be effective only if it is performed by experts, since the task can be difficult. It is easy to make mistakes that can influence the accuracy of the survey. In countries with a developed market economy, there are many surveys that deal with the statistical relationship between demographics and purchasing power. Statistical relationships have been established among the age of the head of the household, the income of the breadwinners and the probability of buying a unit. In Hungary, the probability among a certain group of prospective buyers of buying a unit can be determined only through empirical research. These studies are expensive, so they can hardly be justified for the majority of small- and medium-sized enterprises.

Assessing demand through target groups

A careful study of target groups of prospective buyers of new units is much more effective. These groups can consist of the well-paid employees of different economic enterprises and banks, foreigners interested in buying or renting units, groups that migrated from other cities or from neighboring countries and people receiving local or central subsidies for buying a home. Expert studies and analyses on the real estate market can help identify these groups.

Assessing demand through housing statistics

Due to the lack of primary information, a rough examination of demand can be performed on the basis of information on units that have been constructed and sold in the past few years. Hypothetically, in the past, supply was significantly higher than demand. Therefore, we can assume that families intending to buy a home have already bought a unit suitable for them. In other words, the actual demand roughly corresponds to the number of people who have bought a flat or a house in the city recently. The necessary information on the construction and residential permits issued in the past two or three years can be obtained from the construction authorities. Many municipalities now use a computer system to track and process these figures. Investment companies must be contacted to obtain figures on the number of units sold. Trends in change in the demand through time can be determined using these figures.

Information on the average price and the typical price of housing units published on the basis of real estate registration can inform you about the secondary market. On the basis of this kind of information, real estate developers can determine the number of units sold in the secondary market, and, based on total sales figures, they can have a picture of the number and value of transactions carried out in the primary and secondary markets. These figures must be organized and evaluated by districts.

The actual demand can be identified by monitoring the sales of new constructions. By keeping an eye on housing construction, the real estate developer can obtain a true picture of new sales in the district. The collection of these figures is very effective, as they are available free (marketing information, advertising publications) or at a very small cost (e.g., the cost of photocopying technical plans and informative publications in certain cases).

Assessing demand on the basis of the developer's own performance

The easiest way for a developer to identify demand is to examine past sales. While this method will not determine demand outside of the developer's local neighborhood, for most small and medium-sized projects measuring neighborhood demand is all that is needed. To assess demand, the developer must analyze earlier sales and project future sales. The analysis requires the developer to keep detailed records on the following:

- inquiries from prospective buyers, on a weekly and monthly basis, including information on the type of product the customer is interested in and how he/she found out about the project;
- total sales contracts closed on a weekly and monthly basis; and
- default rate on any contracts.

Based on the above information, demand can be charted and graphed month by month. From the chart, the developer can estimate and project not only cash flow from completed contracts, but also the impact of new sales.

In project demand based on the developer's own performance, the developer must make judgments on the effects of outside influences, such as:

- seasonal fluctuations;
- which products are most desirable and sought after;
- the impact of price;
- the trend of community employment;
- increase/decrease in inflation;
- changes contemplated in government housing subsidies; and
- increase/decrease in borrower's loan interest rates.

While much of this analysis seems obvious, in the past, when contemplating a housing development project in Hungary, developers were not compelled to examine past performance or project future demand.

2.6 Supply

In the housing market, demand and supply are on opposite sides. Demand can be distinguished on the basis of quantity, price and quality, according to the following:

- type of ownership;
- type of building;
- method of construction;
- technical parameters (number of floors, construction technology);
- technical and esthetic parameters of the units (base area, number of rooms, layout, fixtures and fittings, etc.);
- location (inner city, garden city, suburb); and
- age (new construction, 1-5 years old, 5-10 years old, etc.) or the period of construction (the turn of the century, the 1920s, the 1930s, etc.).

Besides characteristics of the product—to be assessed on the basis of objective and subjective criteria—housing prices are determined mostly by the difference between demand and supply, the “general feeling” in the market (e.g., interest rates) and the impact of government intervention (e.g., rental policy, subsidies). Housing prices are influenced by the general economic situation. In the long term, housing prices increase more quickly than the rate of inflation.

Supply follows the changing demand only slowly, owing to the nature of the supply stock. This is a source of tension among the different market segments. It may happen that, although the number of units equals the number of households, as a consequence of the differences in the quality, there is a high demand in certain segments, while in others there are a lot of vacancies.

Besides distinguishing among the above-mentioned product groups, another important area of the market division is the identification of so-called “replacement” products. The different housing products compete regarding price, quality and location. Not only other new units, but existing “used” units compete with new units, especially in a market where the price of a new unit is much higher than the price of a used unit.

An important part of analyzing the demand is defining the profile of competing products as precisely as possible in the targeted area. A simple form of it is the so-called “windshield survey”: When walking around the selected area, we gather impressions about the units under construction there (the type of the building, architectural character, quality, the stage of completion, etc.). Based on the master plans and the construction permits found at the municipalities, we can make an estimate of the volume of expected competition in time and space. In American literature, this analysis is illustrated by a water pipe: The water flowing from the faucet represents the units brought to the market and, as we move backwards on the pipe, we come to projects and development sites to be realized further in the future (houses under construction, infrastructure, land under site preparation, areas under new zoning regulations, etc.). The name of the analysis, “pipeline analysis,” refers to this analogy.

A subsequent analysis of the supply extended over the whole city and broken down according to location, price and demand is the classical method of analyzing the supply. The application of this method is especially important in the preparatory phase of the project, when we are looking for the “gap” in the market, where we would like to enter with our product. Information on the competing projects can be obtained from different sources:

- advertisements in the local press;
- site visits to the construction; and
- information obtainable from the construction authorities on the projects under way and planned.

The developers must do their best to collect all the available information. The information collected should be organized according to the following method.

An Analysis of the Competing Projects

Indicators	Project/Location		
	Project 1	Project 2	... Project n
The start/end of construction			
The number of units built			
The number of units sold			
An estimate of the monthly average of sales			

Based on the information, the following can be done.

- Determine the sales period of competing projects and determine whether this period is the same as that for the projected sales of the developer’s own project.
- Determine how many units of the same quality and on the same price level are the competing projects planning to sell at the same time as the developer’s own project is brought to the market.
- Compare the sales patterns—estimated and actual—of the competing projects and the developer’s own project.
- Compare the prices of competing projects and the developer’s own project.

Assessing the effective demand in the market

Effective demand shows the number of units that can be sold in the market during a certain period. For example, if the effective demand in the market in the city is 80 units per month, it means that presumably this is the highest number of units that can be sold in the free market of the city—under normal circumstances. Effective demand must be determined not only in the entire city but separately for each district. Two basic concepts must be considered during the use of this indicator.

- First, a crucial element of the effective demand in the market is the period when most of the units are sold. Supply and demand can be determined considering different periods. When preparing the loan application, the real estate developer should prepare a forecast for monthly sales. The analysis of the supply and the demand therefore must cover the same period.
- Second, effective demand can change in the function of the sales patterns of individual projects (effective demand is a statistical indicator determined through experience).

Let’s use an example and suppose that the subject of our analysis is “Project A,” which involves the construction and the sale of 60 units. Construction starts in the third month of the year and lasts 14 months. Sales start in the seventh month and take 10 months. In the same area of sales, three other competing projects are implemented, with the following parameters.

Chapter 2: The Process

- Project B offers 90 flats for sale. Construction started last year. The units are put on sale after the third month following the beginning of the construction, and the sale of the units can be expected to finish within 11 months, that is, in January in the following year.
- Project C offers 50 flats for sale. Construction starts in the seventh month of the year. Sales start in December and continue in the first half of the following year.
- Project D results in 70 units being brought to the market. The project was finished last year, and 25 units have already been sold. Sales can be expected to finish in the first five months of the following year.

On the basis of a comparative analysis of the above-listed projects, we can say that construction takes place at the same time for all four projects. Let us determine the sales pattern of our own project and of the competing projects. First, let us divide the number of units by the length of the sales period. Using a rough simplification, we assume that the same number of units is sold each month. Later, to arrive at more precise figures, after the effective demand is initially estimated, we can take seasonal fluctuations into account. After this, the number of units expected to sell monthly in the given area can be measured. Finally, knowing that in this sales area the sale of units has been practically the same in the past two years, we can conclude that, in both years, 200 units, that is 16 to 17 units per month, were sold. The bottom line in the following table shows the average rate of monthly sales in the given period.

An Estimate of the Effective Demand

Projects	Number of Units Sold Each Month																		Total (per year)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Project A							6	6	6	6	6	6	6	6	6	6			60 (36)
Competing Project			8	8	8	8	8	8	8	8	8	9	9						90 (81)
Competing Project												7	7	7	7	7	7	8	50 (7)
Competing Project	9	9	9	9	9														45 (45)
Total	9	9	17	17	17	8	14	14	14	14	14	22	22	13	13	13	7	8	245 (169)
Average Effective Demand	16	17	16	17	16	17	16	17	16	17	17	17	16	17	16	17	17	17	399 (200)

After this, we can assess both how well "Project A" can do in the market and its feasibility. To do this, the estimated monthly sales must be compared to the average effective demand in the market. During the total sales period of the project, the number of units offered for sale by all the projects together is smaller than the average of the effective demand in the market, except during December and January. Therefore, assuming that the other factors are the same, our project can compete with the other projects, and the demand is high enough to make it possible to realize the projected sales pattern.

After comparing our project with the effective demand in the market, we must make minor adjustments in the sales plan to increase the number of sales to eight in the period between the seventh and the eleventh month. After this, the projected sales

volume in the critical last month of the year and the first month of the following year must be reduced. On the basis of the given parameters, the advertising and the sales strategy of the project can be fine-tuned.

Finally let us go through the general topics of housing market research.

- 1) Evaluating the site
 - the present and the expected status
 - a study of the environmental factors
 - accessibility
 - provision of services
- 2) The potential demand
 - demographic indicators
 - households
- 3) Effective demand
 - trends
 - models
- 4) Defining the target group
 - the size and the composition of the target group
 - financial situation
 - the use of cars
 - price/quality preferences
 - expectations concerning the location
 - other expectations
- 5) Examining the housing stock
 - a statistical analysis of the demand in the catchment area
- 6) The competitive situation
 - the profile of the competitive projects
 - the profile of the planned projects
 - an analysis of the finished reference projects

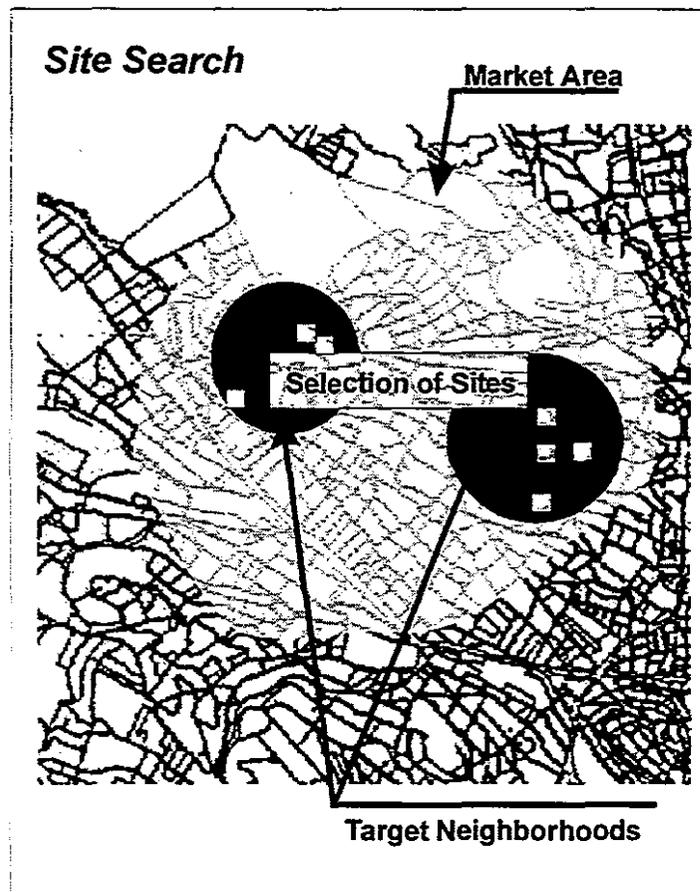
Conclusion

- identifying the target group
- proposal for a development program
- price/quality (product) to be aimed at
- price level to be achieved
- expected sales period
- proposal for the timing of the project

2.7 Selecting the Site

According to the favorite saying of real estate professionals, three things are needed for real estate development: a good site, a good site and a good site. A good site in the English version of the joke means, first of all, good location, “a favorably situated” site. However, when selecting the site, several macro- and micro-environmental factors must be considered. The decision on the location of the site can be made after identifying the demand and the supply in the market. In the areas sought after in the market, we must examine what sites or what property can be considered. The first step in selecting the site is locating the market geographically.

One of the results of housing market study is identifying the so-called *product-market combinations*. The different end-users look for different real estate products. Within the different sectors of the real estate market, these product types and the location determine the market segments. Location in many cases is as important as the product itself: In a good location, there may be significant demand for a “weaker” house. Within the given geographical limits of the market, we must find the areas with the most favorable characteristics for the given market segment. Within the geographical structure of the city, we can distinguish the *city center*; the different *sub-centers*, which are not necessarily the same as the administration centers of certain parts or districts of the city; the *outskirts* (inner and outer) and the *catchment area*, the area surrounding the city. During the different phases of the development of the city, different factors have influenced the process of development and the actual forms in which the geographical structure of the city is realized.



After identifying the target areas, a developer can find a suitable site in different ways. The first method is getting to know the selected area in detail, that is, discovering the present use of the area. This involves both understanding the survey of the master and zoning plans for the area and touring the area. Another solution, which is usually combined with the first, is taking account of the sites put up for sale in the market. Many developers are contacted directly by the owners of sites, who do not go through the real estate market. Finally, the developer can try to find sites through advertisements. The site offered must be analyzed quickly to see whether it is worth spending time with it at all. Based on the project to be realized, the characteristics of an "ideal" site must be identified and, through a simplified, short-calculation, feasibility study, must be checked. The factors that are considered when selecting a site can be grouped according to the following:

- 1) The characteristics of the site: the location, shape, size and other aspects: the type of ownership; the selling conditions; estimated value; regulations, etc.
- 2) The market environment: the location, a survey of the land, the real estate market in the neighborhood, the competitive situation, the scope of the sought-after real estate products, prices, the expected revenues of the project, timing, etc.

- 3) The technical condition: land and soil conditions, utilities, roads, drainage, etc.
- 4) Architectural opportunities: opportunities for construction on the site and variations thereof, internal inspections, roads, etc.; all these based on current regulations.
- 5) The estimated costs: assessing the expected costs of the work needed to establish the conditions for the construction and the costs of the construction.
- 6) Legal conditions: clarifying the legal issues related to the acquisition of the site, the terms of the contract, the wording of the contract, etc.

On the basis of the above information, the developer can decide whether he wants to buy the site and, if so, under what conditions. To be able to keep his leading position, the developer must, of course, always be one step ahead of the market. This requires long-term planning and a suitably designed strategy for buying land. Accordingly, successful real estate developers buy "spare land." For the site to produce income in the transition period between purchase and sale (to at least cover the costs incurred), it must be used. A widespread form of temporary use is creating guarded parking lots. In the case of former agricultural areas to be developed, a solution can be to maintain the present use for a few more years in the form of a land lease, but putting up billboards or letting the site for storage space, etc., is also possible. During the transition period, one should examine whether acquiring certain adjacent sites would strengthen the position of the given site and under what conditions it is possible to buy them (purchase options).

Creating a foundation for a competitive advantage requires a strategic foundation for the purchase of the land. The developer must know the part of the city and the market he works in very well. The following steps are needed in this respect:

- 1) a knowledge of the past, present and planned utilization of the area, its transport system and the system of its highway and road connections;
- 2) information about the type, character and future economic prospects of the existing area and the future economic prospects of the owners and the users;
- 3) knowledge of the political tendencies affecting the area and the most influential figures, the forces controlling the policy of the city concerning the given area;
- 4) an overview of the documents detailing the current regional development policy, the master plan and development concepts;
- 5) liaison with the chief architect of the city or the district, the head of the construction authority and the officials responsible for different areas;
- 6) liaison with the real estate brokers, architects and lawyers who know the area well;
- 7) identification of active competition in the area, information on competitive companies and entrepreneurs and their projects (finished and planned);
- 8) identification of development trends in the area, the character of the development, the dynamics of the land and property prices; and

- 9) most important to decision making about the purchase of any site, monitoring of the expected demand and supply trends in the given area in the targeted segment of the real estate market.

In practice, this means acquiring the zoning plan for the part of the city where housing development is planned and examining the number of construction permits issued and the profile of finished constructions. The developer must examine what the demand for the accomplished projects was, how many potential buyers inquired about the projects, the profile of those who showed an interest in the projects and of the actual buyers (e.g., in the case of residential units, their age, size of their family, what they were looking for exactly) and in what percentage of the cases was the property purchased or rented in advance. It is also important to find out whether the area is a target of immigration or if the demand is basically local in character.

3 Preparing the Loan Application

3.1 Sources

When constructing residential units for the free market, the financial bases of the project are the developer's own capital, the loans taken out for the construction and the payments of the buyers. Among the sources of housing construction, we should mention the subsidies provided by the central government and the municipalities. These partly help the short-term financing of the developer (an interest subsidy makes the loan more affordable) and also improve the purchasing power of the buyers (housing construction subsidy, interest-free loans or grants to subsidize the acquisition of a family's first owned home). In Western Europe and America, long-term loans available for buyers (mortgage loans) play a very important role in housing finance.

To determine the capital needed to start a project, one must assume an expected yield that is determined on the basis of market research. The developer can only receive a loan if he can produce an adequate share of his own capital. Financiers normally approve a loan if the developer's own capital share is at least 20% to 30%. Using the capital, of course, incurs costs as well: The cost of the loan is the interest; the costs of the developer's own capital (or the partner investors' capital) is the expected return. Based on the law of the capital leverage, in the case of a successful project, the lower the proportion the developer's own capital is of the combined loans, the higher the projected return will be.

The "price" of the capital and the loan is, of course, proportional to the risks. In the case of lending rates, however, several other indicators have an important role. Getting an approval for the loan is easier if there is some kind of guarantee of repaying it. We can speak of "project financing" if the condition for generating the loan is only the feasibility of the project. In other words, the guarantee of the loan is the project itself and not some other commitment of the borrower. For project financing to become widespread, it is essential that housing construction enterprises should emphasize the preparation of the project and its economic and market foundations.

3.2 Prefeasibility Analysis

The real estate developer, as we have said in the introduction, is not so much a person with capital but rather a person of ideas who works first of all with other people's money. Time is the most valuable factor for him: He has to discard ideas for projects that won't work as soon as possible. He gains preliminary information on opportunities in the market after examining certain areas. A simple calculation is needed to determine whether it is worth dealing with a given site or not.

The starting point of the prefeasibility calculation is the price of the unit; which depends on two factors: estimated average size of a typical unit (in square meters) and estimated sales cost per unit (what price the developer thinks he can sell the average

unit for). The expected price of one unit can be determined on the basis of the results of the market survey. There are two ways the developer can estimate how many units can be constructed on the site. First, an architectural draft design can be sketched up. Second, the total useful net base area—the area that can be sold—can be calculated according to the regulations of the master plan of the city. The gross income of the project can then be calculated. However, the cost of selling (the agent's fee) has to be deducted from this income to determine the net income:

$$\{\text{the base area of residential units/non-residential units/garages, etc., that can be constructed}\} \times \{\text{HUF/m}^2 \text{ attached to the different items}\} = \text{gross income}$$
$$\text{Gross income} - \text{the costs of selling} = \text{net income}$$

All costs of construction are deducted from the net income, using estimated values that are as exact as possible under the circumstances. The costs of acquiring the land are not included because we are trying to arrive at the cost of land.

Preparation of the site includes the following construction:

- demolishing buildings on the site;
- site preparation;
- a road to the site;
- water;
- sewage;
- electricity;
- transformer;
- gas;
- telephone;
- cable TV; and
- landscape gardening.

Construction costs for the units include:

- the construction cost of residential units (the contractor's tender price);
- the construction costs of nonresidential units;
- the construction costs of garages;
- architect's and expert's fees;
- structural engineer;
- other experts (lawyer, geologist, land surveyor);
- administrative costs;
- technical inspectors;
- site supervisor;
- office costs;
- advertising and marketing;
- unforeseen costs;
- contingencies;

- financing costs;
- credit;
- prefinancing;
- interest cost;
- the cost of a bank guarantee;
- expected profit; and
- the developer's own capital.

By deducting the development costs and the developer's profit from the sales proceeds of the project, we get the amount that—if our estimates on the income and the costs are right—can be paid for the site.

Net income less expenses = the price of the site

According to our calculations, this “residue value” will be accurate only if the project is accomplished on the site and is sold under the conditions used in the calculations. This also means that the price of the site calculated in this way must be accurate 1 or 10 years after the time of the calculation. Therefore, this amount has to be discounted to the present value. (The present value calculation can be most simply interpreted as the “reverse” of compound interest.) In the example shown in the appendix at the end of this chapter, this discount rate is 25%, which can be taken as an average loan interest. At the same time we calculate the discount rate, we express how expensive the money is that we use to buy the land. Usually the site is bought with the developer's own capital. The return expected on the developer's capital can be expressed by selecting the discount rate. Of course, the higher the discount rate is, the lower the calculated present value will be.

3.3 Land Purchase Price

In the following section, we will show an example of the residue site value calculation prepared with the help of a spreadsheet program. The figures shown here are only illustrations, and our main purpose is to show the logic of the calculation. The model for the calculation starts with an introduction of the project's parameters: The address of the property, the size of the site, the required price and a proposal showing the results of the calculation and the calculated sales price are shown here. By showing the parameters of the regulation, we can check whether the planned project conforms to the local construction regulations.

The incomes can be forecast on the basis of the parameters of the planned projects and on the perception of the market. The model shown here includes the sale of the flats, the garages (parking places) and the land belonging to a unit separately, since the last is exempt from VAT. Only the useful base area can be considered for the income, so the gross construction area is modified by a base area efficiency coefficient, which is 85% in our examples. The rougher—and consequently the faster—the calculation is, the

more coefficients are used for estimations. Of course, it is possible to give an estimated figure as well.

The Costs of Development

We would like to talk a little about the cost factors listed. Site preparation, the infrastructure, the fees to be paid, etc., are considerable costs, which make the site more expensive. It is important for the developer to have as much general information about the neighborhood as possible. We can get estimates on these costs from specialists who know the area (e.g., those who prepare the master plan).

The *construction costs* involve only the building itself, and usually the main contractor's tender price is shown here. The model calculates the costs per unit for the gross base area.

Remuneration of the experts taking part in the project can be given as a percentage of the total costs of construction. Some of the administration or management costs are clearly added up from some of the construction supervision and technical inspection, etc. costs and from the general office costs that provide the overhead for the daily work of the company.

Unexpected changes and modifications occur during every project. It is important for the lender to feel that the developer who is applying for a loan thinks realistically and is conservative in his calculations, that is, that he makes provisions for the unexpected. The percentage value in the model determines these provisions in relation to the amount of all the estimated costs listed so far, and it is hoped that these provisions will not have to be used fully through the implementation phase.

The *period of financing* is the period of construction and sales together. In the example, after 3 months' preparation, it takes 12 months to construct the building. After that, it takes another 3 months to sell the units.

Normally, the developer does not take out the loan at the beginning of the period of financing. Instead, he takes the loan in installments later, during the construction period. The function of the cumulative value of taking out the loan is usually a gradually rising curve. This curve can be replaced by the 50% loan amount "taken" for the whole period. The size of the loan depends on the lender's expectations concerning the developer's own capital. Normally, banks do not finance the purchase of the site or the designer's, expert's, etc. costs incurred during the preparation of the project.

We use the commercial interest rate determined by the bank, but when calculating the *interest subsidy*, which is 75% to 50%, etc., depending on the length of the construction period, we use the base interest rate plus 1.5%. The effective interest rate is calculated according to the:

Chapter 3: Preparing the Loan Application

$$(\text{base interest rate} + 1.5\%) \times (1 - 75\%) + (\text{loan interest rate} - \text{base interest rate})$$

formula (if the maturity is within 1 year). The cost of the loan is the bank's "fee" (bank service and stand-by charges). Additional financing costs besides the interest burdens are the costs of the bank guarantee (if it is used) and the expected profit on the developer's own capital.

The last line in the model is the "present value" of the site. Of course, this does not mean that we would like to buy the site at this price. What is sure, however, is that we cannot afford to pay more for the given site. If the development position and the price of the site are realistic according to the results of the market research, it is worth spending more time and energy on performing more detailed calculations and studies. The model has two sides: the data input field and the summary sheet, where the above items are shown in less detail but in a more easily comprehensible format. The suggested sales price is determined by the person performing the analysis, and this figure is taken into account throughout the additional calculations.

Telek ár meghatározása (Residual land value calculation)			
1.	PROJECT		
1.1	Város (city)	X	
	District	X	
1.2	Fejlesztő (developer)	X	
1.3	Beruházás (project)	X	
1.4	Tanácsadó (consultant)	KOLPRON	
1.5	Dátum (date)	X	
1.6	Teleknagyság (plot size)		1 114 m ²
1.7	Kínalati ár (asking price)		19 000 000 HUF
1.8	Kínalati ár/m ² (asking price/m ²)		17 056 HUF
1.9	kalkulált ár/m ² (calculated offer price/m ²)		13 424 HUF
1.10	Javaslat	tárgyal, negotiate	
1.11	Javasolt vételár (buy for)		17 000 000 HUF
2.	SZABÁLYOZÁS (REGULATORY REQUIREMENTS)		
2.1	Övezeti besorolás (zoning)		03K
2.2	Beépíthetőség szint felett (site coverage above ground)	30,00%	334 m ²
2.3	Beépíthetőség szint alatt (site coverage below ground)	30,00%	334 m ²
2.4	Emeletek száma (number of floors)	3	1 003 m ²
2.5	Tet dtér (attic)	1	334 m ²
2.6	Építményvolumen szint felett (maximum building volume above ground)		1 337 m ²
2.7	Építményvolumen szint alatt (maximum building volume below ground)		334 m ²
2.8	Maximális beépíthetőség (total building volume)		1 671 m ²
3.	TERVEZETT LÉTESÍTMÉNY (PLANNED PROJECT)		
3.1	Építményvolumen szint felett (maximum building volume above ground)		1 216 m ²
3.2	Építményvolumen szint alatt (maximum building volume below ground)		350
3.3	Lakások száma (number of residential units)		13
3.4	Értékesíthető lakás terület (saleable residential space)	85%	1 034 m ²
3.5	Tervezett parkolók száma (saleable parking space)	25	13
3.6	Fejlesztés ütemezése (project development phasing)	elkészítés	tervezés
3.7	hónapok (months)	4	3
4.	ÉRTÉKESÍTÉSI BEVÉTELEK (PLANNED INCOME)		
4.1	Lakások (residential units), Eladási ár (sales price)	F1m2	145 000 145 000 000
4.2	Telekrész (land component)	F1m2	60 700
4.3	Ingatlan rész (Dwelling component)	F1m2	24 300
4.4	Parkolók (parking), Eladási ár (sales price)	F1m2	1 200 000 15 600 000
4.5	Telekrész (land component)	F1una	600 000
4.6	Ingatlan rész (Parking component)	F1una	600 000
4.8	Bruttó összbevétel (total revenues)	F1	165 530 000
4.9	Lakások eladási ára (sales price/unit)	F1	12 733 677
4.10	ÁFA kalkuláció (VAT calculation)		
4.11	Lakások (dwellings)	F1	21 731 550
4.12	- Telek (land)		0
4.13	- Ingatlan (units)	25,00%	21 075
	Lakások ÁFA nélküli ára/m ²		123 925
4.14	Parkolók (parking)	F1	1 950 000
4.15	- Telek (land)		0
4.16	- Ingatlan (units)	25,00%	150 000
	Parkolók ÁFA nélküli ára/egység		1 050 000
4.17	Nettó összbevétel (net income)		141 748 450
4.18	Lakások utáni bevétel (revenue/unit)		10 526 804

Chapter 3: Preparing the Loan Application

5.	FEJLESZTESI KÖLTSEGEK (DEVELOPMENT COSTS)			
5.1	Terület előkészítés (land preparation)			
5.1.1	Bontás (demolition)	Ft	300 000	300 000
5.1.2	Terep rendezés (levelling)	Ft	350 000	350 000
5.1.3	Utak (roads and access)	Ft	0	0
5.1.4	Víz (water)	Ft	0	0
5.1.5	Csalóma (sewage)	Ft	350 000	350 000
5.1.6	Elektrómos hálózat (electricity)	Ft	0	0
5.1.7	Transzformátor (transformer)	Ft	0	0
5.1.8	Gáz (gas)	Ft	0	0
5.1.9	Telefon (telephone)	Ft	0	0
5.1.10	Terület előkészítési ktsg. Összesen (total land preparation cost)	Ft		1 000 000
5.2	Közmű fejlesztési hozzájárulások (public utility development fees)			
5.2.1	Víz (water)	Ft	300 000	300 000
5.2.2	Csalóma (sewage)	Ft	300 000	300 000
5.2.3	Elektrómos hálózat (electricity)	Ft	400 000	400 000
5.2.4	Gáz (gas)	Ft	300 000	300 000
5.2.5	Telefon (telephone)	Ft	0	0
5.2.6	Közmű fejlesztési ktsg. összesen (total public utilities)	Ft		1 300 000
5.3	Építkezés (building construction)			
5.3.1	Lakások (residential units)	Ft/m ²	72 500	88 160 000
5.3.2	Parkolók (parking spaces)	Ft/m ²	0	0
5.3.10	Kertépítés (landscaping)	Ft	800 000	800 000
5.3.3	Építkezési ktsg. összesen (total building costs)	Ft		88 960 000
5.4	Szakértői díjak (professional fees)			
5.4.1	Építész (architect)	% (5.3.3)	2,50%	2 224 000
5.4.2	Statikus (structural engineer)	% (5.3.3)	0,00%	0
5.4.3	Szakmémők (other specialists)	% (5.3.3)	0,00%	0
5.4.5	Szakértői ktsg. összesen (total professional fees)	Ft		2 224 000
5.5	Menedzsmet költségek (management costs)			
5.5.1	Kivitelezés felügyelete (site supervision)	% (5.1.11 + 5.3.3)	1,00%	859 600
5.5.2	Iroda (office overheads)	% (5.1.11 + 5.3.3)	5,00%	4 498 500
5.5.3	Eladás és hirdetés (marketing and advertisement)	% (4.8)	0,90%	827 550
5.5.4	Menedzsmet ktsg. összesen (total management costs)	Ft		6 225 250
5.5.5	Értékesítési jutalék (agent's fee)	%	3,00%	4 965 900
5.6	Tartalékeztetés (contingencies)	% (5.1.11+5.2.6+4.3.3+5.4.5+5.5.4)	3,00%	2 991 278
5.6.1	Előre nem látható költségek (contingencies)	Ft		2 991 278
5.7	FEJLESZTÉS KÖLTSEGE (DEVELOPMENT COSTS)	Ft		107 666 428
5.7.1	alapterületre vetítve (per m ²)	Ft		104 126
5.7.8	egységre vetítve (per unit)	Ft		8 282 033
5.7	FEJLESZTÉS KÖLTSEGE (DEVELOPMENT COSTS)	Ft		107 666 428
5.7.1	alapterületre vetítve (per m ²)	Ft		104 126
5.7.8	egységre vetítve (per unit)	Ft		8 282 033
6	Finanszírozási mutatók (finance costs)			
6.1	Bankközi alapkamat (interbank rate)	%	18,00%	
6.2	Megengedett marzs (maximum spread)	%	1,50%	
6.3	Építkezési kölcsön támogatás (construction loan subsidy)	%	75,00%	
6.4	Kölcsön kamatláb (bank lending rate)	%	26,00%	
6.5	Betét kamatláb (interest on deposits)	%	29,00%	
6.6	Építkezési kölcsön kamatláb (effective interest on construction loan)	%		12,88%
6.7	Diskont ráta (Discount rate)	%	25,00%	
6.8	Infláció (inflation)	%	15,00%	
6.8	Fizetés ütemezése (schedule of payments)	1/		12
7.	Saját tőke (required equity)	%	25,00%	35 447 113
8.	Vevő finanszírozás (buyers deposit)	%	0,00%	0
9.	Kölcsön (loan)	%	75,00%	80 749 821
	Egyszerű és garancia kts. (Initiation and loan guarantee costs)	%	3,00%	807 498
9.1	Kamatköltség, fejlesztési periódus (interest cost, development period)	4 990 339	48,00%	12
9.2	Értékesítési késedelem (interest loss, sales period)	450 517	26,00%	2
9.3	Kölcsön kamattörlesztés (interest payments)	5 440 858		6 248 354
9.4	Elvart befektetett tőke hozam (required return on equity)	20,00%		3 270 993
9.5	Nyereség egységenként (profit/unit)			636 230
9.6	Összes költség (development costs+profit)			122 165 774
9.7	Befektetés / épített m ² (investment/saleable residential m ²)			118 168
9.8	Befektetés/lakás egység (cost/unit)			9 398 905
9.9	maradék telek érték (land value)			19 802 676
	maradék telek érték/m ² (land value/m ²)			17 597
9.10	Telek finanszírozás költsége (finance cost of land holding)	20,00%	0,793414	14
9.11	Jelenlétek (present value of site)			15 593 038
9.12	nyereség a telken (profit on land)	0,00%	1,000000	15 553 036
9.13	vásárlási költségek (acquisition costs)	4,00%	1,040000	598 194
10	A TELEK ÉRTÉKE (SITE VALUE TODAY)			14 954 842
10.1	a TELEK ÉRTÉKE (SITE VALUE/M ²)			13 424
10.2	JAVASOLT VÁSÁRLÁSI ÁR (RECOMMENDED PURCHASE PRICE)			17 000 000

3.4 Pro-Forma Analysis

If the project performed well at the preliminary assessment of the calculation based on the residue principle (see above, Residual Land Value Calculation), further and more detailed analysis can be performed through the cash-flow projection (see pro-forma on following pages). The pro-forma spreads out the project income and expenses month by month over the development of the entire project and constitutes a basic part of the loan application. The first part of the pro-forma model is the Residual Land Value Calculation, which was discussed previously. The income is calculated according to the logic we have already introduced.

- Based on the “Regulation indicators,” the base area to be constructed can be determined (residential unit/parking space).
- Under the heading “Planned construction,” we have the actual parameters of the building. The base area that can be sold is calculated from the gross base area (with the percentage value expressing the base area efficiency).
- The heading “The timing of the development” gives an overview of the planned duration of the different phases of construction.
- Finally, multiplying the sales price per unit based on the market research with the net base area, we get the total sales or proceeds for the project. By deducting the agent’s fee from total sales we get the net sales proceeds.

In the case of financing indicators, we calculate the interest rate according to the logic already seen above, supposing a subsidized loan.

The discount rate (25% in this example) for the developer is the value of the money, that is, the expected return. As we have already discussed in detail, expectations for the return are always determined as a function of the risk. Government securities can be regarded as zero-risk investments. The maturity of the discount treasury bills available can be compared easily to the duration of housing construction projects. The interest rate of the treasury bill is therefore the interest related to the “return expectations” of a risk-free investment. For this to happen, the developer must add his own risk premium (e.g., 5%, 8% or 10%), considering the situation in the market.

On the other side of the model, there are the input fields for separating costs and incomes in time. On the first page, the detailed cost items are included in the main items, and the costs can be distributed in time in percentage values. We can do the same when calculating the expected timing of the sales.

Chapter 3: Preparing the Loan Application

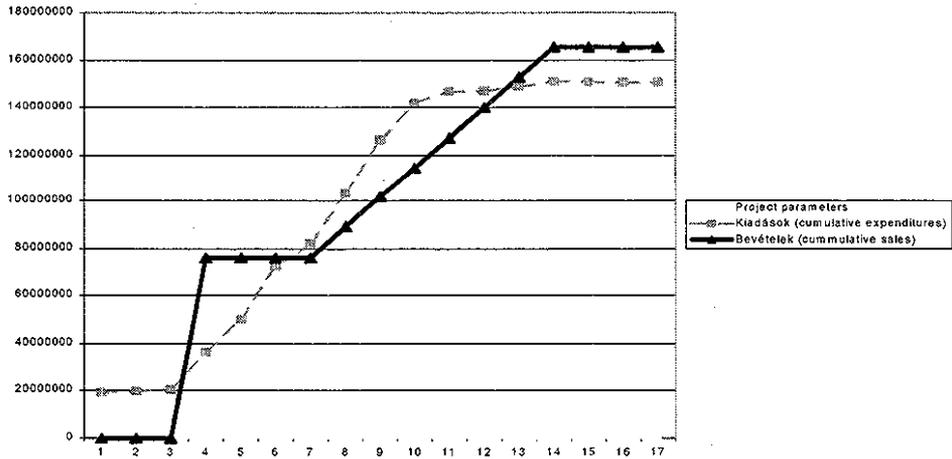
PRO FORMA PÉNZTÖLVÉSI SZÁMLÁK						
PROJECT						
Város (city)	X					
Fejlesztő (developer)	X					
Terület (project)	X					
Tanácsadó (consultant)	KOLPRON					
Dátum (date)	X					
ÉRTÉKESÍTÉS (SALES)						
Értékesítés ütemezése (sales schedule)	1	2	3	4	5	6
	0	0	0	0	0	0
FEJLESZTÉS (DEVELOPMENT)						
Fejlesztés ütemezése (development schedule)	1	2	3	4	5	6
Föld vásárlás (land purchase)	100%	0%	0%	0%	0%	0%
Terület előkészítés (land preparation)	0%	0%	0%	50%	50%	0%
Bontás (demolition costs)	0%	0%	0%	100%	0%	0%
Fejlesztési hozzájárulások (dues and fees)	0%	0%	0%	0%	0%	0%
Építkezés (construction)	0%	0%	0%	0%	10%	10%
szakértői díjak (professional fees)	0%	10%	0%	0%	0%	0%
Kezelésmenet költségei (management costs)	0%	0%	0%	0%	0%	0%
Értékesítési jutalék (agent's fee)	0%	0%	0%	0%	0%	0%
Reszerváció (contingencies)	0%	0%	0%	0%	10%	10%
BÉVÉTELEK (REVENUES)						
Lakások (residential units)	0	0	0	76 398 462	0	0
ÁFA befizetés (VAT payment)	0	0	0	-10 957 638	0	0
Nettó bevétel (net revenue)	0	0	0	65 440 823	0	0
Összesen (total)	0%	0%	0%	46%	0%	0%
KIDÍJAK (COSTS)						
Föld vásárlás (land purchase)	-17 747 742	0	0	0	0	0
Terület előkészítés (land preparation)	0	0	0	-625 000	-625 000	0
Bontás (demolition)	0	0	0	-375 000	0	0
Fejlesztési hozzájárulások (dues and fees)	0	0	0	0	0	0
Építkezés (construction)	0	0	0	0	-11 120 000	-22 240 000
szakértői díjak (professional fees)	-249 080	-249 080	-498 170	-498 170	-996 352	0
Kezelésmenet költségei (management cost)	-375 518	-375 518	-751 035	-751 035	-747 030	-747 030
Értékesítési jutalék (agent's fee)	0	0	0	-2 664 942	0	0
Reszerváció (contingencies)	0	0	0	0	-358 953	-358 953
Összesen (total)	-18 370 345	-622 603	-871 691	-5 310 148	-13 847 335	-25 345 983
ÁFA jogvisszatérítés (VAT reclaim)	0	0	238 489	88 941	115 629	950 869
ÁFA pozíció	0	0	238 489	-10 868 698	115 629	950 869
Kiadások összesen (total costs)	-18 370 345	-622 603	-633 202	-15 978 846	-13 731 707	-22 395 114
Összesen (total)	12%	0%	0%	11%	9%	15%
ÉRDEKENY FINANSZIROZÁS BEKÖLTSÉGEI (CASH FLOW BEFORE FINANCING)						
Havi eredmény (monthly results)	-18 370 345	-622 603	-633 202	60 419 638	-13 731 707	-22 395 114
Kumulatív eredmény (cumulative results)	-18 370 345	-18 992 948	-19 626 150	40 793 455	27 061 758	4 666 644
FINANSZIROZÁSI KÖLTSÉGEK (FINANCING CASH FLOW)						
Saját tőke (equity)	35 447 113	16 267 269	15 646 666	15 013 464	0	0
Égyszerű és garancia Kta. (Initiation and loan guaranty costs)	-607 498	0	0	0	0	0
Havi költségek (monthly investment)	-18 370 345	-622 603	-633 202	-15 978 846	-13 731 707	-22 395 114
Tőke pozíció (equity balance)	16 267 269	15 646 666	15 013 464	-985 382	-14 707 447	-37 260 359
Tőkeösszeg (loan amount)	0	0	0	-985 382	-14 707 447	-37 260 359
Kamat fiz. (interest rate)	2,1%	1,1%	1,1%	0	1,1%	1,1%
Tőkeösszeg (cost of loan)	0	0	0	-10 358	-157 799	-339 773
Tőkeösszeg (loan balance)	0	0	0	-975 740	-14 865 245	-37 600 132
Eredmény finanszírozással (result with finance)	1	2	3	4	5	6
Záró egyenleg (closing balance)	16 267 269	15 646 666	15 013 464	-975 740	-14 865 245	-37 600 132
Havi eredmények (monthly results)	16 267 269	15 646 666	15 013 464	0	0	0
Fejlesztési cash flow (development cash flow)	-19 177 843	-622 602	-633 202	60 499 258	-13 887 505	-22 794 886
Kumulatív cashflow (cumulative cash flow)	-19 177 843	-19 800 445	-20 433 647	39 975 609	26 086 104	3 291 217
of which is equity	35 447 113	16 267 269	15 646 666	15 013 464	0	0
of which is loan	0	0	0	-985 382	-14 707 447	-37 260 359
Project parameters	1	2	3	4	5	6
Kiadások (cumulative expenditures)	15 177 843	19 600 446	20 433 648	36 412 495	50 144 201	72 530 315
Bevételek (cumulative sales)	0	0	0	76 398 462	76 398 462	76 398 462

Of course, calculations distributing the different items at absolute values, in time, are also possible. The model for the calculation can be set up for individual projects in different ways. Considering their characteristics, what matters is that the model must have the same logic as the one shown here. We must never forget that the model is only a means to examine the indicators of the project's results and for the developer to feel what freedom of action he has to study the different scenarios. If there are errors in the figures we use in our calculations, the result will distort reality.

In the "incomes" and the "expenses" field, the absolute values of incomes and expenses are calculated on the basis of income and expense indicators expressed in percentages. For the sake of interest, we show the results without financing. We determine the net present value of cash flow and the internal return rate supposing that there is no loan and that the expected return on the capital is 0%.

Of course, money is needed to implement the project, and money has a price, which is expressed in the expected return concerning the developer's own capital (a rate that is in proportion to the risk but also takes the risk profile of other alternative investments into account) and in the interest to be paid concerning a loan. The cash-flow table shows the financing costs broken down monthly (capital account and loan account). In the case of cash flow calculated with financing, we also look at the NPV and the IRR.

In the last lines of the cash flow table, we can project the accumulation of the costs and the incomes on the graph.



The diagram above shows the costs curve throughout the project. The closing page shows many details of the previous two pages in a uniform balance sheet.

The profit and loss account shows the financial result achieved at a nominal value first (not taking the time value of money into account). The reality, however, is shown by the values of the discounted values, the NPV and IRR (calculated without taking financing into account). We use three main indicators besides these: the profit realized in the percentage of incomes and expenses and the profit projected on the developer's own capital invested. With the help of this last figure, we can make comparisons to see whether we would have gained more or less if we had invested our money in another project. We should not forget, however, that when we use the time value of money for calculating the profit and loss statement, the yield expectation used to determine the discount rate is proportional to the developer's risk, which means that if the discount rate is different, the same system of conditions—sales prices, the maturity of the project, etc. (see the data input page)—brings a positive result. The risks, however, cannot be avoided. Therefore, the developer deceives himself if he does not determine the time value of money with this in mind. The message of the indicators is this: If the present value is negative, the project will see a loss with the given rate of return.

Chapter 3: Preparing the Loan Application

Depending on how the discount rate relates to the IRR, we can see the profit realized on the developer's own capital.

PROFIT & LOSS STATEMENT		x
Tanácsadó (consultant)	KOLPRON	
		HUF
Items		
A. Befektetett saját tőke (own equity)	35 447 113	
B. Kölcsön (loan)	-116 793 224	
C. Összeg (Budget)	149 904 427	
I. Bevételek (Revenues)		
Összes bevétel (gross sales revenue)	165 530 000	
AFA befizetés (Less VAT)	-23 741 550	
Nettó bevétel (net sales revenue)		141 788 450
II. Költségek (project costs)		
Telek (land purchase + associated costs)	17 747 742	
Infrastruktúra (infrastructure)	2 875 000	
Kivitelezés (construction) + Bontás	111 575 000	
Tervezés (design)	2 490 880	
Irányítás (management)	7 470 300	
Értékesítési kts. (less cost of sales)	6 207 375	
Tartalékképzés (contingencies)	3 589 533	
AFA visszaigénylés (VAT reclaim)	-25 792 953	
Összes költség (Total project costs)	108 415 135	126 162 877
III. Nyereség (cash flow before financing)		
		15 625 573
Kamat fizetések (financing costs)		-7 282 203
IV Profit finanszírozással (after financing)		
		8 343 370
% a bevételeknek (% of sales)		5,9%
% a költségeknek (% of costs)		6,6%
% a saját tőkének (equity)		23,5%
V Kockázatok (risks)		
V1. Profit 0 ha a bevétel (if sales revenue is)	94,1%	a tervezettnak (of planned)
V2. Profit 0 ha a költségek (if project costs are)	106,6%	a tervezettnak (of planned)
V3 Profit 0 ha az értékesítés késik (if sales delayed by)	37	hónapot (months)
V4. Profit 0 ha a telek vételára (if land purchase price is)	147,0%	a számítottak (of calculated)

Item V. in the balance sheet is the sensitivity test: Considering the above, it shows the difference allowed among the incomes, the costs, the timing of the sales and the calculated and actually paid sales price of the site to prevent the project from becoming a loss maker.

Compiling the loan application

The loan application serves two purposes. First, it is an official document of the loan request. Second, it is structured information on the basis of which the lender makes a decision. The details of the form and the content of the loan application can be found in the printed forms available from the banks. A loan application usually contains the following:

- The name of the applicant
- The legal status of the applicant
- The official address of the applicant
- The required loan amount

- The maturity of the loan and the sources for repayment
- The purpose of the loan
- The name and the address of the property
- The characteristics of the site
- The characteristics of the building

In addition, the appendices attached to the application contain the following:

- The reports on the applicant's financial condition
- The financial reports of the third party providing a guarantee
- Bank and professional references

In the application, the applicant can introduce his enterprise, his scope of activity and the market environment he works in and on which he bases the success of the project. If this is a case of project financing, through which the lender regards the cash flow of the project and its income as the source of repayment of the loan, market research and an analysis of the feasibility of the project is of crucial importance, but this does not mean that there is no need for other collateral. The lender has obvious reasons for getting his money back, whether through the project, through the borrower or through a third party.

The application must include a section in which the applicant confirms, with his signature, that the information he provided is true and that authorizes the bank, if necessary, to examine the information submitted, including the bank and professional references.

The application is prepared and submitted to the bank by the borrower. It is advisable that the applicant consult with the representative of the bank while preparing the application to make sure that all the information required for the underwriting of the loan is available. The information provided about the applicant, the personal guarantor and the other parties participating in the project must include the business past of the enterprises, especially if they are new to the bank.

In this book, we have attempted to summarize the process through which the housing developer can prove the feasibility of the project to the financing partner by collecting, processing and analyzing the information necessary to gain approval for the construction loan. The developer does this by translating, so to speak, his own business vision into the language of quantitative and qualitative aspects of market trends and the arithmetic of economic analyses.

4 Case Study

4.1 Market and Project Feasibility Analysis

Introduction

To illustrate the methods presented in this *Developer's Handbook*, a typical project market and project feasibility analysis is presented in this section. In this hypothetical example, a developer proposes to build 40 residential units on a 3,400-square-meter site located in one of the up-market Buda Districts in the Hungarian capital.

This case study is broken into the following sections.

- **Description.** This section describes the project, the neighborhood, and the site.
- **Demand Analysis.** This section defines the “top residential buyers” that this project is targeting. The definition includes affordability, employment, household incomes, and demographic trends.
- **Supply Analysis.** This section looks at geographic location, market product, prices, and competition.
- **Development Analysis.** This section uses spreadsheet models to evaluate the financial feasibility of the project.
- **Land Purchase Price.** This section includes a model to determine how much the developer should pay for the land. Typically, this information is part of the package presented to the bank with an application for a loan.
- **Cash Flow Projection.** This section uses month-to-month estimates for income and expenses to demonstrate how the project will be built and how the money, which is borrowed, will be used.
- **Profit and Loss Statement.** This section summarizes the projected profitability of the development.

In proposing this project, the developer demonstrates that, with an equity investment of HUF 286 million (US\$1.2 million), within 18 months, the investors in this project should realize a profit of HUF 109 million (US\$470 thousand), a 38% annual return on equity.

No investment is guaranteed, and past performance may not ensure future success. However, this case study is a realistic example of the presentation any Hungarian developer will need to make to both investors and bankers to convince them to put money into the project.

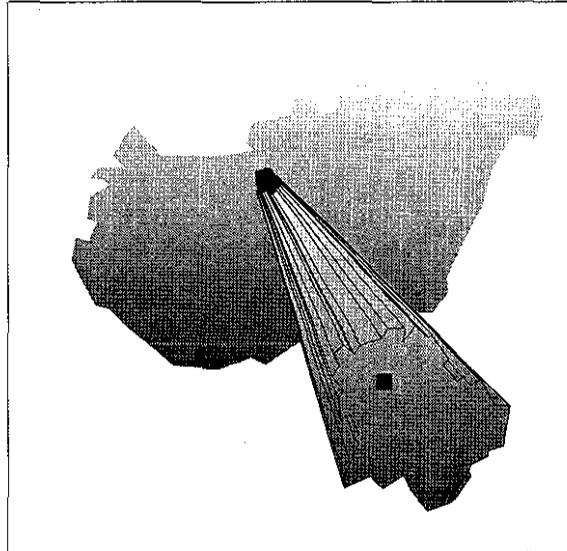
4.2 Project Description

This report was prepared by a well-established developer with a solid track record of building more than 150 top-quality residential units (in the form of 8 to 12 multifamily units) during the past 5 years.

Project Information

The unique site in this case study has the potential for 40 townhouse units, with an estimated sales value of approximately HUF 1 billion. Because of the size of the investment and the anticipated bank financing requirements, it was decided to prepare an in-depth project study.

The site is 3,400 m² and is located in a prestigious neighborhood, a 10-minute walk from a major public transportation hub with a wide range of shops and services.



There are two schools close by, and part of the site looks upon a public park. Adjacent to the park is an indoor sports facility with squash courts and a fitness center. The immediate neighborhood consists of small condominiums with four to eight units and large villas, mostly from the pre-war period. Some buildings are historic.

Site SWOT (Strengths, Weaknesses, Opportunities, and Threats)

Strengths

This site, located on a gentle slope, provides an excellent environment for a residential project because it is located close to the heart of Buda while still being in a “green” neighborhood. This is one of the last sites in the area that is suitable for a landscaped residential project development so close to the inner city.

The natural vegetation of the site provides an attractive landscape in which to place the project. The site is a short walk from public transportation and within a 15- to 20-minute drive from quality and international schools. Major retail and entertainment facilities are also close by, but far enough away so they do not disturb the peace of the neighborhood.

Weakness

The site is formerly part of a large single residential estate. A good 60% of the site is covered by mature vegetation and is designated in the submitted zoning plan as “protected.” Thus, only 40% of the site can be developed; this may make the eventual project density too high.

Opportunities

Acquiring and developing the site would yield a unique, high-quality residential project in a very good location, which would retain lasting residential property value. At a later stage of development, a land subdivision plan may allow separation of the “protected area” from the currently designated “developable area,” thereby opening new opportunities to increase the density of the “protected area.”

Threats

The required density of the development exceeds the building-up density of the surrounding neighborhood. Upon submittal of the development permit application, there was strong opposition from the neighbors. Although the plan was approved, to secure the building permit, we estimate that some delays or further reduction of the allowed building volume may result from the building application process.

4.3 Demand Analysis

Target Market Definition

Affordability: Employment and Incomes

Since 1990, the share of the Hungarian population employed or earning an income as entrepreneurs increased from 33.3% in 1989 to 41.6% in 1996. The 33% labor participation rate appears to have stabilized since 1996, with around 10% of the population unemployed, 28% retired and about 25% of school age. The entrepreneur’s share is growing, making up about 4.5% to 5.5% of the current population. The market economy also introduced a growing income disparity between families in general and those living in specific regions of the country. The top 10% of the population earns 7.5 times more than the bottom 10% does and about 2.5 times the median income. In 1996, the gross per capita annual income in the top 10% income deciles was HUF 689.000 which, with our estimates of a 20% growth rate in both 1997 and 1998, will be around HUF 992.000. The capital city of Budapest has been the major beneficiary of the deep restructuring of the Hungarian economy. While direct foreign investment accounts for about 20% to 25% of the country’s population, about 45% of direct foreign investment is concentrated in the Budapest GMA. In the financial and business services sector (those that registered the highest growth rates in salaries and other employment benefits), the foreign investment was almost exclusively made in the Hungarian Capital. (Source: Central Statistical Office, 1997 Household budget survey, 1996, Privatization Institute)

Income estimates for Budapest are about HUF 346.000, or more than 25% higher than the national average (with the unemployment rate being 5% or 50% of the national average. Thus, the per capita income in the top 10% stratum is estimated to be HUF 1,190,000 to 1,250,000 per year in 1998. Translating per capita incomes into household incomes (average 2.4 for Budapest), the yearly income in the top 10% social stratum is about HUF 3,000,000. According to a survey carried out by the Association of Hungarian Managers, there are about 40,000 to 60,000 people employed as top managers by medium- and large-size companies in Hungary. That is approximately 1.4% of the total labor force. Adding another 1.5% of entrepreneurs who manage their own successful companies, the top stratum of the Hungarian business community is around 3%. Incomes in the top 3% managerial stratum are estimated to be HUF 8,000,000-10,000,000 per year (US\$35,000–US\$43,000), of which about 15% is paid out as non-wage benefits (car, pension fund, share options). (Hungarian Managers Association, Price Waterhouse, Hay Management Ltd.)

As both the highest managerial stratum and the successful entrepreneurs are over-represented in Budapest, we expect that approximately 5% of the Budapest labor forces falls within this category. We expect that roughly 2/5 of these 5% are employed as top managers, and the other 3/5 are successful and highly profitable entrepreneurs. Approximately one out of three households in Budapest does not have an active wage earner. Since we expect a considerable amount of double-earning households, in which both partners have a top income, we expect that the share of the households in Budapest belonging to the top income groups will be 3%.

For the purpose of our definition of the market segment of the top income category, we selected the following parameters.

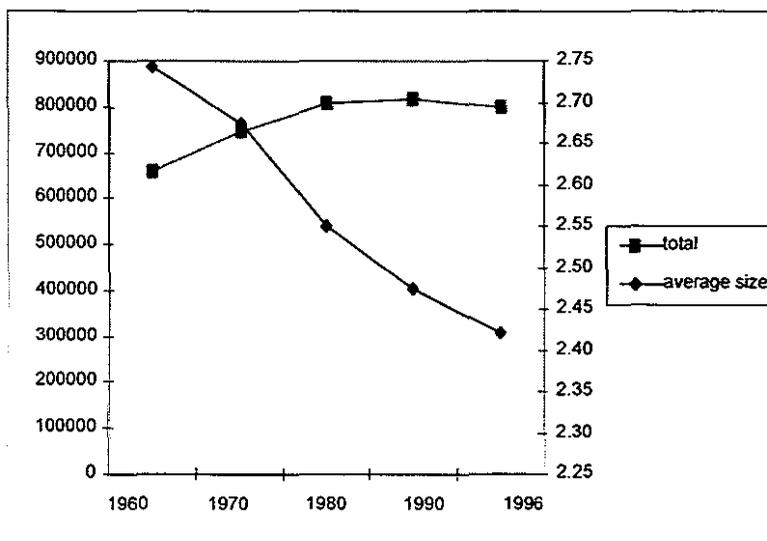
Regular household income	1.25 x 8,000,000 = 10,000,000/year
% of Budapest households belonging to this category	3%
Total number of households in Budapest	779,248
Households in the top 3% income group	23,377
Estimated purchasers of new units / year:	0.8% of all households
This corresponds to the annual number of newly constructed units in Budapest and the surrounding area.	
The market of newly constructed is predominantly for higher incomes, i.e. 2% of highest-income groups.	
Demand for new units in the top 3% market is estimated to be	470 units/year

Demographic Trends/Household Size

Household dynamics

In Budapest, the demand for housing is not generated directly by demographic trends. The population of Budapest has been decreasing since 1988, while the number of households remained stable. As a result, the average size of Budapest households has been decreasing for decades. The average household size is currently approximately 2.4.

Number of Households in Budapest and Average Household Size



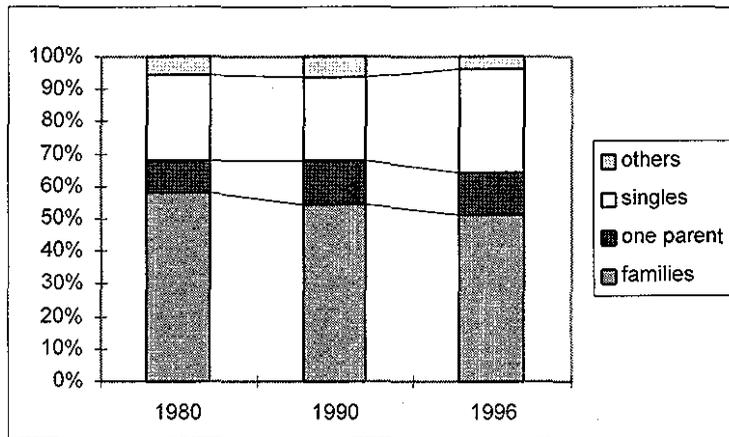
Source: KSH

The primary demand for housing is created by those making an upward move on the housing hierarchy. On the bottom end of the market, the amount of substandard and not-renovated housing is high, whereas there is still a shortage of high-quality housing. Therefore, one can expect a considerable demand for new housing on both ends of the market. There is also a growing number of expatriates interested in buying properties in Budapest.

Household Composition

However, changing household composition is expected to have an impact on the demand for housing. As is shown in the figure below, the increase in single-person households is significant, whereas the number of households with families is gradually decreasing. The increase in single-person households is predominantly related to the aging population, as most of the singles are elderly, with a partner who has died. Also, the average size of families is decreasing. Except for the single-person households, the share of all family sizes decreased.

Household Composition in Budapest



Source: KSH

Though the demand for dwelling space in upper-market households is increasing, the demand for dwellings suitable to accommodate large families is decreasing. This implies that instead of just a greater number of (sleeping) rooms, larger individual rooms are required, as are extra rooms, such as a study room and a dining room. Furthermore, a room for guests is preferred more and more.

Expatriates

Though accurate and reliable data on the number of expatriates and their household composition is lacking, it is evident that there are a considerable number of expatriates in Budapest. This group is characterized by high purchasing power. As the economy of Hungary stabilizes, and integration with the European Union is only a matter of time, more expatriates are becoming long-term residents in Budapest.

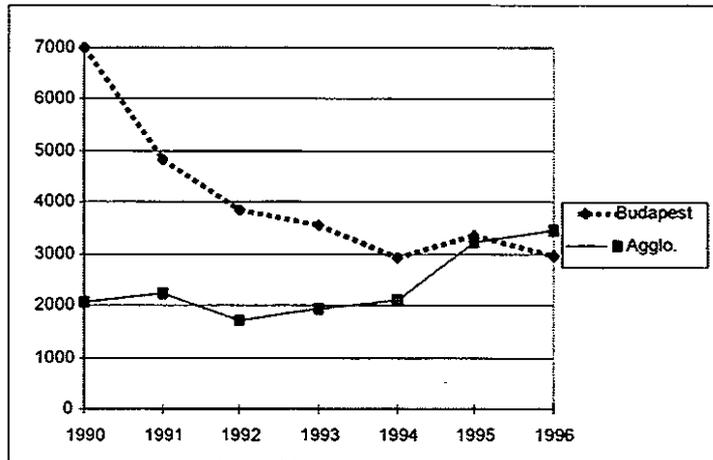
In the sense of household composition, there are basically two different groups of expatriates. The first group comprises young white-collar employees, who generally just graduated and are sent out by their companies to gain experience. This group of singles or cohabiting individuals primarily rent apartments in downtown locations. The second group comprises middle-aged employees (ages 35 to 45), who are more advanced in their careers and live here with their spouses and (young) children. These people tend to rent houses or apartments in the green belt of the Buda districts. The main preconditions are a clean, safe and child-friendly environment, as well as being close to international schools. As foreigners are allowed to own real estate (except arable land or natural conservation areas), we expect that expatriates will become a more important factor in the Budapest homebuyer market.

4.4 Supply Analysis

Budapest Overview: Declining New Housing Construction

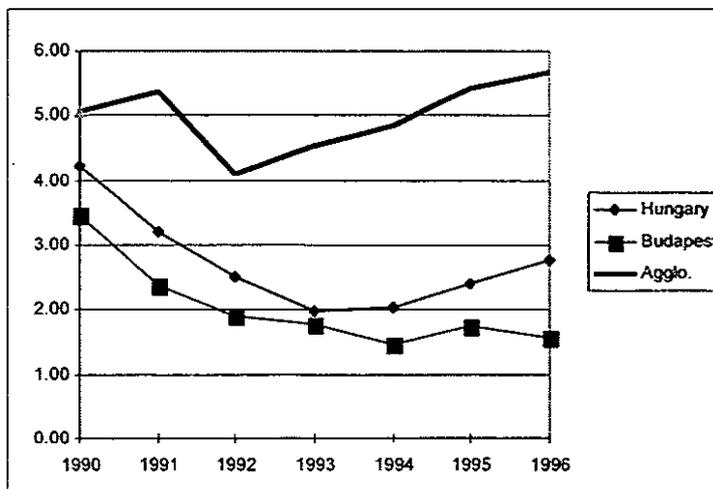
The new housing construction has already been declining since 1980, mainly due to budget cuts in the state housing construction sector. This decline continued after 1990. The drop in output was stronger in Budapest than in Hungary as a whole, while the drop in the GMA of the Hungarian capital was much less than it was at the national level. Although the worst decline in output seems to be over, a considerable increase is still not predicted.

New Housing Construction in Budapest and the Agglomeration (1990-1996)



Source: KSH

New Housing Construction per 1,000 Inhabitants (1990-1996)



Source: KSH

There are three main causes for this drop.

- Investors

The overwhelming majority of new dwellings (around 75% in urban areas, around 67% in Budapest, and almost 100% in rural areas) are constructed by individuals who are not developers.

- Construction Costs

Construction costs are supposed to be too high compared to labor costs, resulting in a high price/income ratio. Net building costs were around HUF 80,000 per square meter during 1998, leading to sales prices between HUF 150,000 and HUF 350,000 or more per square meter, depending on the location and quality.

- Affordability

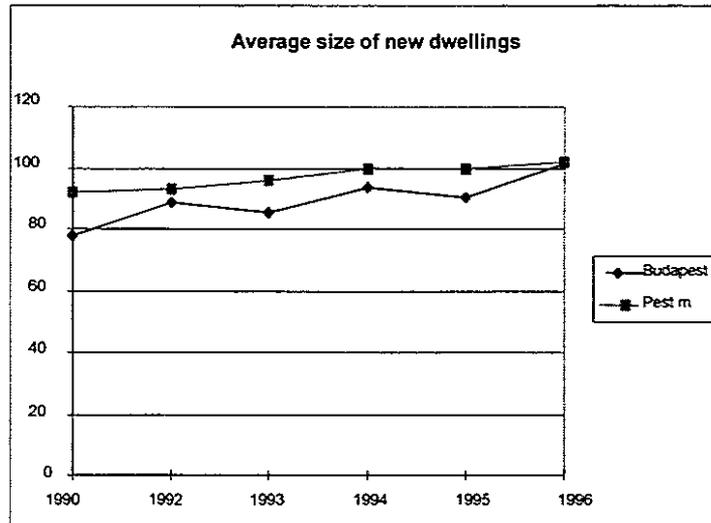
Due to the high price/income ratio, housing construction or buying a dwelling on the housing market is not affordable for the majority of Hungarian households. The problem is further aggravated by the lack of favorable loan and mortgage system accessibility for broad segments of the population.

Owning a dwelling is an important criterion for entering the housing market, since the money from the sale of an apartment provides the bulk of the money needed to buy a new one. Buying behavior is further enhanced by relatively high savings ratios. The real estate market provides one of the best opportunities for investing entrepreneurial non-taxed profits from the non-registered economy. This non-registered economy is considered to be substantial, about 30% of total GNP.

Size of Newly Constructed Dwellings

Besides a decline in construction volume and an increased share of private construction, the average size of newly constructed dwellings in Budapest is increasing, both in terms of size and in terms of number of rooms.

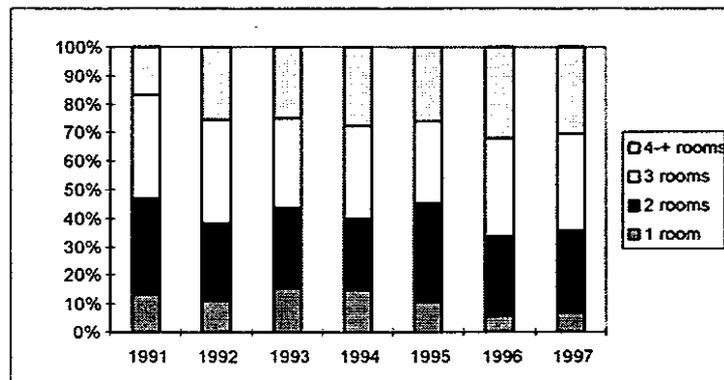
Average Size of Newly Constructed Dwellings (1990-1996)



Source: KSH

The average size of newly constructed dwellings increased from 77 square meters to around 90 to 100 square meters between 1991 and 1996. The average number of rooms also increased. The share of new dwellings with four or more rooms increased from 17.1% in 1991 to 31.8% in 1996. The share of newly constructed three-room dwellings was stable, and the share of one-room and two-room dwellings showed a decrease. The share of one-room dwellings decreased dramatically, from 12.1% in 1991 to only 5.9% in 1996, after a temporal increase in the beginning of the 1990s. These results imply that new dwelling construction in Budapest is becoming more and more a matter of higher-income groups.

Newly Constructed Dwellings by Number of Rooms (1990-1997)

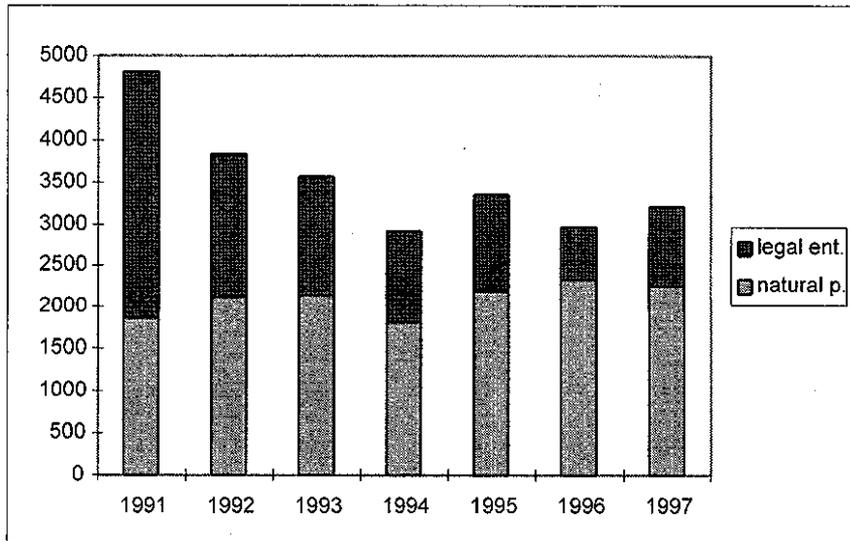


Source: KSH

New Construction Dominated by Private Self-Managed Construction

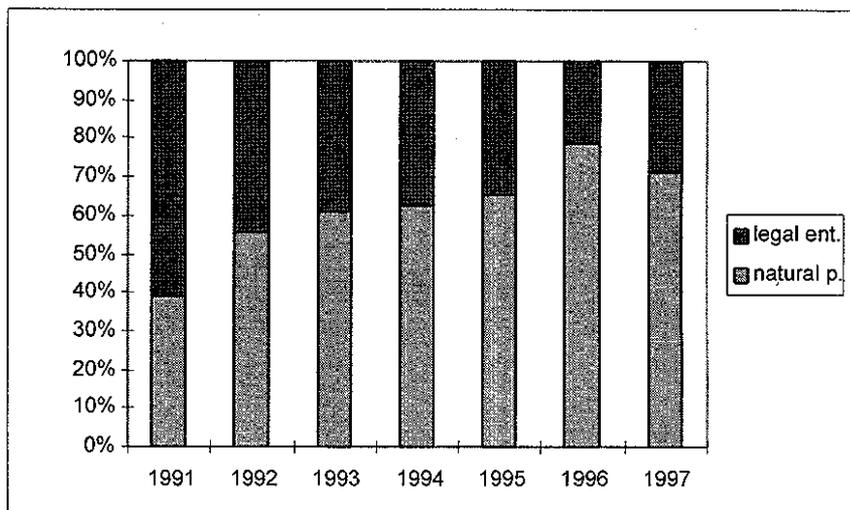
Besides the declining construction volume of new housing in Budapest, the share of private (self-managed) construction focusing on the fulfillment of family housing needs is increasing.

Number of Newly Constructed Dwellings by Constructor (1991-1997)



Source: KSH

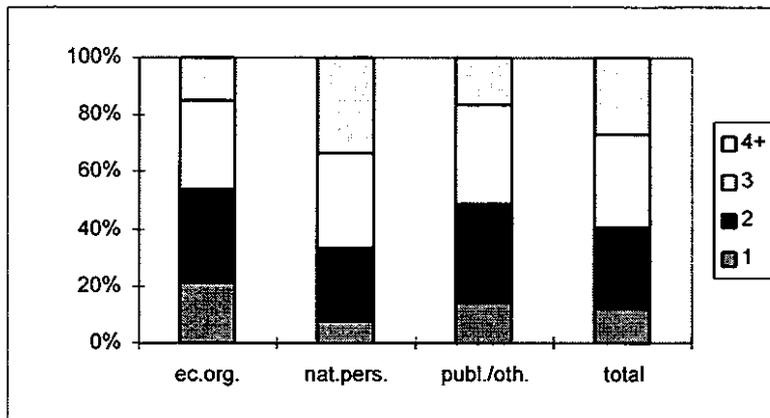
Newly Constructed Dwellings by Constructor (1991-1997) (%)



Source: KSH

There are clear differences between dwellings constructed by different type of constructors. The graph below shows that dwellings constructed by developers between 1992 and 1996 had, on average, fewer rooms than dwellings constructed by natural persons. About 67% of the newly constructed dwellings built by developers had two or three rooms, about 20% had one room, and around 15% had four or more rooms.

Newly Constructed Dwellings by Constructor and by Number of Rooms (1992-1996)



Source: KSH

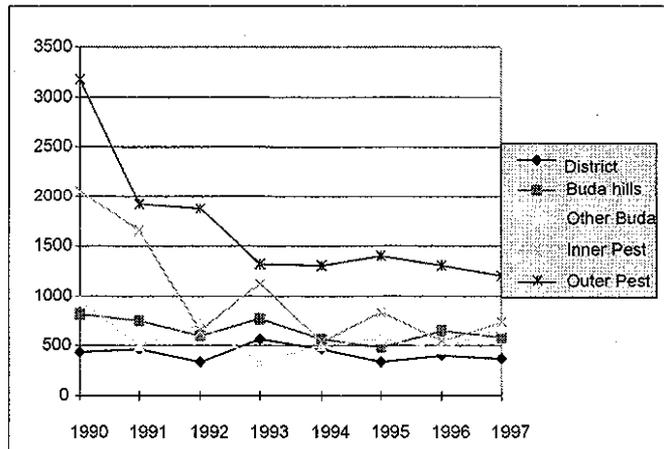
One of the reasons behind these differences in size and number of rooms is the fact that developers tend to construct different types of dwellings. Whereas natural persons are predominantly occupied with constructing single-family houses with garden for their own use, developers are more focused on multifamily housing, like apartments and row houses. Developers are rarely involved in constructing dwellings in existing buildings, as new construction tends to be preferred by buyers on the market, building plots are still available, and new construction tends to be more efficient than constructing in existing buildings. Developers mostly construct row housing and small-scale tenement apartment blocks.

New Housing Construction in the Buda Districts

The new construction in Budapest is not evenly spread over the city districts. The highest rate of construction can be found in peripheral Pest and similar districts, where the opportunities for self-help construction are the best and where the prices of building plots are still within reach of a considerable share of the households. The up-market central-Buda Districts, and to a lesser extent more outlying areas of Buda, also show higher construction intensities. These are the most favorable among developers working for the most expensive ranges of the housing market. These are also these most-popular districts for expatriates to live in. This is partly because of the attractive environment and partly because services like international schools and international libraries are concentrated here.

The graph below shows that the new housing construction in the district remained quite stable compared to other districts. The same can be said about the Buda Hills neighborhoods, though the decline was more substantial there. The decline of new housing construction has more seriously affected the Pest side than the Buda side, as new housing construction, which is becoming more up-market, involves people who can afford and who prefer to live on the Buda side. As the graph below shows, the annual production of new dwellings in the district ranges between 375 and 500 units.

Number of Newly Constructed Dwellings in Budapest

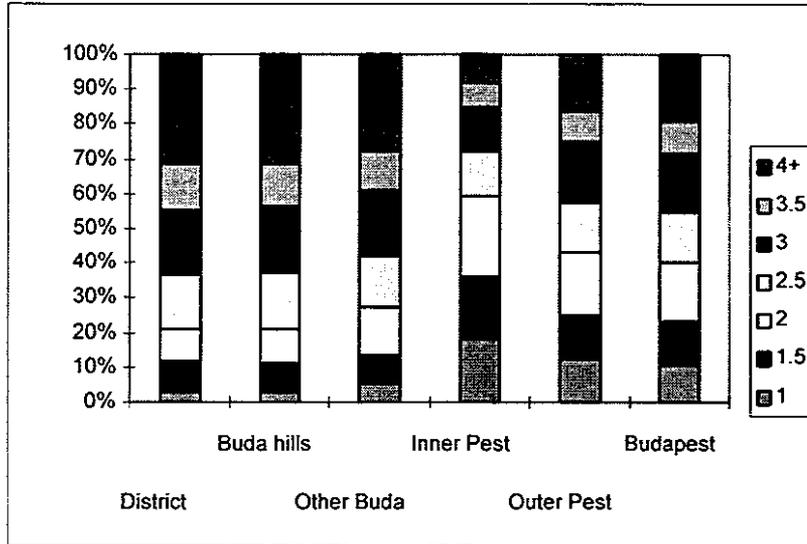


Source: KSH

As building plots are becoming increasingly scarce and are expected to become more expensive per square meter, we expect that new construction will be done with an increased density. This implies more small-scale, luxurious town or garden apartment type of projects.

The situation in the district with regard to construction is not particularly different. Approximately one out of five dwellings is constructed by economic organizations such as developers. Dwellings constructed in the district as well as in the other Buda Hills districts tend to be larger and tend to have a higher average number of rooms. This again is an indication of the importance of the highest market segments in these districts. More than 60% of the newly constructed dwellings has three rooms or more, and around 30% of the newly constructed dwellings have four rooms or more.

Newly Constructed Dwellings by Number of Rooms



Source: KSH

The average size of newly constructed dwellings in the Buda Hills is also bigger than in Budapest as a whole. The average size in the district ranges between 115 and 120 square meters over the last few years, whereas for the city as a whole it ranged between 90 and 95 square meters. This probably has to do with the higher share of houses constructed in the area and with the fact that people are able to pay for more square meters.

Competition Profile and Estimated Adsorption

Property Types for Top Residential Properties

Quality apartments are refurbished high-quality buildings of the pre-war stock in exclusive locations or newly built condominium properties of 120-250 m² usually in 6-12 unit blocks. Whereas the refurbished properties typically represent an individual purchase, custom-built, new apartments are generally supplied by a developer.

Quality villas are single-family units of 150-300 m² set on large (800-2,000 m²) plots. The properties are typically custom built, emphasizing the personal preferences and social projections of the owners. In this market, new housing is generally built for residential purposes only, while refurbishment often involves a change of use into a representative office purpose.

Top Residential Prices

There is still a wide price gap between existing and newly built residential units in the top residential locations. This is a reflection of the fact that most second-hand properties require extensive renovation and upgrading.

New dwellings provided by developers are typically medium-scale projects of 8-20 units, being either 3-4 story condominiums or “garden apartments” in low-rise, townhouse arrangement.

Prices in the in the Buda Hill Districts range from HUF 220,000/m² to HUF 400,000/m² (US\$960 to US\$1,750), including 25% VAT.

New Housing Prices in Budapest (1997-First 5 Months)

District	units constr. *HUF 1,000	units sold *HUF 1,000	price range	average price/sq.m.
Inner Buda				
District	240	138	250-300	280
Buda Hills	76	58	160-280	184
Other Buda				
III	113	99	135-190	165
XI	256	144	90-200	134
XXII	15	15	173	173
Pest				
IV	111	78	85-105	100
VIII	64	46	98-105	101
IX	365	209	99-200	134
XIII	184	101	85-114	104
XIV	321	217	91-130	112
XV	88	11	96	96
XVI	62	16	78-125	87

Competition

The top residential location in Budapest will remain the garden hills of the Buda side. The map and table below show location and profile of projects completed within the last year in the neighborhood.

Chapter 4: Case Study

Project number	1	2	3	4	5
Project name	Residential apartments	Residential apartments	Residential apartments	Residential apartments	Residential apartments
Description	2 freestanding buildings, 3 storey walk-up apartments	Free standing 5 storey building	4 freestanding 4 storey buildings in a landscape environment	Old villa refurbished into a condominium	6 storey intill project
Number of units	12	25	45	6	32
Unit sizes	90 – 135	35-95 – 175	85 - 180	145	40 – 65 - 115
Sales price '000 HUF/sqm	300-315	200 – 230	150-280	280-300	215-245
Start of construction	10/95	02/96	06/95	04/96	03/96
End of construction	8/96	12/96	12/96	01/97	03/97
Units presold	6	10	10	5	8
Units still for sale at 06/97	0	0	2	0	12

Location of Completed Projects



The data shows that, although not in the immediate neighborhood, some 120 units were constructed, of which 20% to 30% were sold before construction started. In the district already during 5 months, almost 138 new built units were sold, showing a take-up of almost 30 units per month. The sales record of the five projects shows 1–2 units sold per month. All units are sold before the end of construction. The only exception is Project 5, where interestingly the 65 square meter, 2.5 room apartments did not sell very well partly as a result of suboptimal orientation (the apartments are dark and look upon a blank wall of the neighboring building).

This corresponds with the developer's own record from previous years (I–IV on the map). As a result of aggressive marketing in the four projects completed last year, more than 40% of units were sold before construction started. About one-third of customers were foreigners or elderly Hungarians returning from abroad. Two projects each containing eight units proved to be very successful, as in both cases 6 units (75%) were presold and the remaining 2 units were sold immediately after the structure could be seen from the street. The other two buildings also performed according to plans. In the first building, 4 of the 12 units were presold and the rest sold 3 months before construction finished. In the second building, a conversion of an existing 1960s office block, 2 of 16 units were presold, with the remaining units selling at a rate of 2–3 units per month. All the units were completed with the highest-quality specifications and included three or four rooms, fully furnished and equipped kitchens, and bathrooms. All units had a garage and an extra gated parking place on site. Units were sold for HUF 280,000–320,000 per square meter, while garages sold for HUF 1.2–1.3 million.

The following map shows current developments (shown as circles) in the pipeline. A supply estimation is also provided.

Location of Competing Projects and Possible Projects in the Pipeline



Chapter 4: Case Study

Project	A	B	C	D	I.1 E	I.2 F
Status	construction	Construction	Building Permit Application	construction	Building Permit Application	Infrastructure development
Project type	Attic conversion	3 storey condominium	Attic conversion	2 freestanding 3 storey buildings	4 buildings in a residential park setting	10 6 unit blocks in a landscaped park setting
Number of units	8	9	4	18	40	60
Unit sizes	45 - 80	115 - 180	120	95 - 145	90 - 120	35 - 140
Price '000/sqm	200	330	n.a.	315-350	n.a.	n.a.
Presold	4	3	2	6	n.a.	n.a.
(Planned) date of start	03/97	02/97	08/97	04/97	10/97	02/98
(Planned) date of completion	10/97	02/98	12/97	05/98	01/99	06/99

Presale rates of 30% to 50% are known, whereas with the larger projects the estimated presale result is about 25%. Based on the above, an estimation of take-up per month is calculated for the development period of the project (starting from 10/97):

Projects	The number of units sold each month																		Total (sold bef. 10/97)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
project	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	40 (10)
Competing project A	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8 (4)
Competing project B	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9 (3)
Competing project C	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4 (2)
Competing project D	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	18 (10)
Competing project E	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	0	0	40 (4)
Competing project F	0	0	0	0	0	0	4	4	4	4	4	4	4	4	4	4	4	4	60 (16*)
Total	10	9	11	9	7	8	8	12	11	11	6	6	6	7	7	7	4	4	130

The estimated average take-up is about 5–10 units per months. Compared to the sales statistics, this falls well within the possible range.

Land Supply Assessment

An in-depth study was commissioned to assess the future supply of residential land in the district. The study surveyed those land parcels that are: a) presently vacant but zoned for housing, and b) under agricultural or recreational use but designated in the Budapest Master Plan as potential residential sites.

In total, there is about 67 ha of vacant land in the district (1.8% of the total 3,634 ha land area of the district) that is likely to be brought into development for residential use in the future. Given the historically prevailing low densities in the district, most of this land will be zoned for single-family dwellings or low-rise condominiums and townhouses. The estimated land supply will yield around 900–1,000 units.

The sites are clustered around three subareas of the district, with some differentiation in terms of market appeal. Some 250,000 ha of development land is located in an outlying, village-like part of the district, which is still considered to be “far” from Budapest and has low levels of public infrastructure and services.

Location of Possible Projects in the Pipeline



Projects in the Pipeline: Land Supply Assessment

Number	Plot size	Zoning	Planned units	Ownership	Regulatory planning status
1	25,000	Institutional	50	public	Planning application started
2	50,000	Institutional	60	private	Planning application started
3	25,000	Institutional	50	public	Plans exist
4	12,500	Institutional	20	private	Plan under modification
5	18,500	Residential	10	private	Plan exists
6	25,000	Residential	50	state	Plan exists
7	89,000	Agricultural	300	co-operative	Incorporation and rezoning
8	23,000	Recreation	30	private	Rezoning required

Sites 1-3 are all large (on average 2.5 ha) plots with once monumental but now derelict property. This area was once the “summer residence” of well-to-do urban families, comprising nice, large houses located in a park-like setting. During the communist era, these buildings housed public or institutional functions, but recently passed into private hands. There is an intense pressure on the municipality to allow low- and medium-density new developments on these sites. The development site under investigation is typical of these plots.

Sites 4-8 are located in the already well developed areas of the district and are either an opportunity of conversion from industrial or institutional to residential use or are simple “in fill sites.”

In reality, there is presently very little land readily available for new construction. Only a few sites have legally valid planning permits and are located in areas where sufficient off-site infrastructure is available.

There are clusters of sites, which are in a similar stage of “preparedness” for development (Sites 1-3). They are all within the urbanized designation of the district; the present zoning allows residential use but a detailed regulatory plan has to be prepared before the building permit can be issued. These sites all have some off-site infrastructure deficiencies, which require investments by the developer outside of the actual property. The four sites comprise approximately 12.5 ha and may yield approximately 200-220, mostly multiple-family residential units. In our view these parcels will come to the market in the next two years.

Further down in status are the outlying sites (not shown on map) and Site 8. These parcels, some still classified as for agricultural, forestry, recreational, or institutional use, are all outside of the “urbanized” boundary of the district but are designated in the long-term master plan of Budapest as potential future residential areas. Their development will require first the extension of the “urban land boundary” (itself a complicated procedure, involving the city and the Ministry of the Environment) and then the extension of the off-site urban infrastructure. Nevertheless, these types of “leapfrog” speculative sites have been the hallmark urban land conversion on the Buda side in the last decade of soft regulatory discipline, and therefore we consider these properties as part of the residential land supply in the future.

The bulk of potential new land supplies identified in this study belong to this category. It comprises approximately 33 ha of land, about half of the potential new supply. Given the legal and infrastructure difficulties in this area, we predict that this land will be on the market, ready for development in about 5-8 years. In summary, the district is running out of vacant building plots for larger-scale residential construction. Much of the new construction is currently built on incidental single-family plots or a conversion of a low-density, single-family home parcels into multistory dwelling (spot zoning).

4.5 Development Appraisal

Prefeasibility Analysis

How much should the developer pay for the land?

Prefeasibility is assessed using the residual model. This information does not form a part of the loan application package or the communication between the developer and the bank. The main reason to do such assessment is to support internal decision making within the development company. The question to be answered is whether the opportunities a particular development site offers are worth further investigations or not. The calculation helps the developer formulate his or her negotiating strategy on the purchase conditions with regard to the site.

First, a regulatory assessment shows whether the proposed development fits with regulatory requirements. Based on site plans and consultation with the architects, these parameters can be checked against the proposed development. In our example, a 40-unit building is assessed, with average unit size of 85 square meters, a total of 5,000 square meters gross. One floor is the garage in the basement. From the net salable floor space, the total revenue of the project can be calculated.

Development costs are grouped into four main categories: land development, infrastructure development, construction, and management/designer fees. This is important for the developer, as in such detail fairly accurate empirical numbers based on past experience can be used for the appraisal. Also a cost sensitivity analysis can be per-

formed. These costs are financed from two sources: own equity and loan acquired. The cost of capital is related to the interest rate and the length of the loan amortization period. This model also takes into account those government subsidies that are currently available in Hungary for housing construction. The cost of own capital is the required return.

The costs and revenues estimated in the RLV calculation are used to perform the detailed pro-forma (CF). These costs are spread over time. The level of detail of such CF prediction depends on the bank's loan application requirement. The feasibility assessment is presented here as a set of pro-formas.

Land Purchase Price

Telek ár meghatározása (Residual land value calculation)			
1.	PROJECT		
1.1	Város (city)	X	
	District	X	
1.2	Fejlesztő (developer)	X	
1.3	Szerkházás (project)	X	
1.4	Tanácsadó (consultant)	KOLFRON	
1.5	Dátum (date)	X	
1.6	Telkenagyság (plot size)	3 400 m ²	
1.7	Kínálási ár (asking price)	250 000 000 HUF	
1.8	Kínálási ár/m ² (asking price/m ²)	73 529 HUF	
1.9	Kalkulált ár/m ² (calculated offer price/m ²)	69 860 HUF	
1.10	Javaslat	tárgyalj, negatíva	
1.11	Javasolt vételár (buy for)	220 000 000 HUF	
2.	SZABÁLYOZÁS (REGULATORY REQUIREMENTS)		
2.1	Övezeti besorolás (zoning)	03K	
2.2	Bélepfelhősség szint felett (site coverage above ground)	30,00%	1 020 m ²
2.3	Bélepfelhősség szint alatt (site coverage below ground)	30,00%	1 020 m ²
2.4	Emeletek száma (number of floors)	4	4 080 m ²
2.5	Tető ter (attic)	0	0 m ²
2.6	Épület volumen szint felett (maximum building volume above ground)		4 080 m ²
2.7	Épület volumen szint alatt (maximum building volume below ground)		1 020 m ²
2.8	Maximális beépíthető térfogat (total building volume)		5 100 m ²
3.	TERVEZETT LEÉPÍTÉSMŰ (PLANNED PROJECT)		
3.1	Épület volumen szint felett (maximum building volume above ground)		4 080 m ²
3.2	Épület volumen szint alatt (maximum building volume below ground)		1 020 m ²
3.3	Lakások száma (number of residential units)		40
3.4	Értékesíthető lakás terület (saleable residential space)	85%	3 400 m ²
3.5	Tervezett parkolók száma (saleable parking space)	25	40
3.6	Fejlesztés ütemezése (project development phasing)	elő készítés	kihelyezés értékesítés
3.7	hónapok (months)		12
4.	ÉRTÉKESÍTÉSI BEVÉTELEK (PLANNED INCOME)		
4.1	Lakások (residential units), Eladási ár (sales price)	F/m ²	320 000 1 088 000 000
4.2	Telkesrészt (land component)	F/m ²	100 000 1 500 000
4.3	Ingatlan rész (Dwelling component)	F/m ²	220 000
4.4	Parkolók (parking), Eladási ár (sales price)	F/Unit	1 500 000 80 000 000
4.5	Telkesrészt (land component)	F/Unit	750 000
4.6	Ingatlan rész (Parking component)	F/Unit	750 000
4.8	Bruttó összbevétel (total revenues)	Ft	1 148 000 000
4.9	Lakások eladási ára (sales price /unit)	Ft	28 700 000
4.10	AFA kalkuláció (VAT calculation)		
4.11	Lakások (dwellings)	Ft	187 000 000
4.12	- Telek (land)		0
4.13	- Ingatlan (units)	25,00%	55 000
	Lakások AFA nélküli ára/m ²		285 000
4.14	Parkolók (parking)	Ft	7 500 000
4.15	- Telek (land)	0,00%	0
4.16	- Ingatlan (units)	25,00%	187 500
	Parkolók AFA nélküli ára/egység		1 312 500
4.17	Nettó összbevétel (net income)		953 500 000
4.18	Lakások utáni bevétel (revenue /unit)		23 837 500
5.	FEJLESZTÉSI KÖLTSÉGEK (DEVELOPMENT COSTS)		
5.1	Terület előkészítés (land preparation)		
5.1.1	Bontás (demolition)	Ft	0
5.1.2	Terep rendezés (levelling)	Ft	3 500 000
5.1.3	Utak (roads and access)	Ft	1 500 000
5.1.4	Víz (water)	Ft	0
5.1.5	Csatorna (sewage)	Ft	3 500 000
5.1.6	Elektromos hálózat (electricity)	Ft	0
5.1.7	Tranzformátor (transformer)	Ft	0
5.1.8	Gáz (gas)	Ft	0
5.1.9	Telefon (telephone)	Ft	0
5.1.10	Terület előkészítési ktsz. Összesen (total land preparation cost)	Ft	8 500 000
5.2	Közmű fejlesztési hozzájárulások (public utility development fees)		
5.2.1	Víz (water)	Ft	0
5.2.2	Csatorna (sewage)	Ft	0
5.2.3	Elektromos hálózat (electricity)	Ft	1 200 000

The residual land value calculation continues on the next page. Note: This spreadsheet is the same as shown on pages 29-30, of course with different numbers.

Chapter 4: Case Study

5.3	Építkezés (building construction)			
5.3.1	Lakások (residential units)	Fl/m2	90 000	360 000 000
5.3.2	Parkolók (parking spaces)	Fl/m2	60 000	60 000 000
5.1.10	Kertépítés (landscaping)	Fl	2 500 000	2 500 000
5.3.3	Építkezési ktsg. összesen (total building costs)	Fl		422 500 000
5.4	Szakértői díjak (professional fees)			
5.4.1	Építész (architect)	% (5.3.3)	3,50%	14 787 500
5.4.2	Statikus (structural engineer)	% (5.3.3)	0,00%	0
5.4.3	Szakmérnökök (other specialists)	% (5.3.3)	0,00%	0
5.4.5	Szakértői ktsg. összesen (total professional fees)	Fl		14 787 500
5.5	Menedzsment költségek (management costs)			
5.5.1	Kivitelezés felügyelete (site supervision)	%(5.1.11 + 5.3.3)	1,00%	4 310 000
5.5.2	Iroda (office overheads)	%(5.1.11 + 5.3.3)	5,00%	21 550 000
5.5.3	Eladás és hirdetés (marketing and advertisement)	%(4.8)	0,50%	5 740 000
5.5.4	Menedzsment ktsg. összesen (total management costs)	Fl		31 600 000
5.5.5	Értékesítési jutalék (agent's fee)		3,00%	34 440 000
5.6	Tartalék képzés (contingencies)	%(5.1.11+5.2.6+4.3.3+5.4.5+5.5.4)	5,00%	23 929 375
5.6.1	Előre nem látható költségek (contingencies)	Fl		23 929 375
5.7	FEJLESZTÉS KÖLTSÉGE (DEVELOPMENT COSTS)	Fl		536 956 875
5.7.1	alapterületre vetítve (per m2)	Fl		157 928
5.7.8	egységre vetítve (per unit)	Fl		13 423 922
6	Finanszírozási mutatók (finance costs)			
6.1	Bankközi alapkamat (interbank rate)	%	18,00%	
6.2	Megengedett marzs (maximum spread)	%	1,50%	
6.3	Építkezési kölcsön támogatás (construction loan subsidy)	%	75,00%	
6.4	Kölcsön kamatláb (bank lending rate)	%	25,00%	
6.5	Betéti kamatláb (interest on deposits)	%	19,50%	
6.6	Építkezési kölcsön kamatláb (effective interest on construction loan)	%		11,88%
6.7	Diszkont ráta (Discount rate)	%	25,00%	
6.8	Infláció (inflation)	%	15,00%	
6.8	Fizetés ütemezése (schedule of payments)		17	12
7.	Saját tőke (required equity)	%	30,00%	296 050 000
8.	Vevő finanszírozás (buyers deposit)	%	0,00%	0
9.	Kölcsön (loan)	%	70,00%	667 450 000
9.0	Egyszeri és garancia kts. (insurance and loan guarantee costs)	%	2,00%	13 349 000
9.1	Kamatköltség, teljesítési periódus (interest cost, development period)		39 629 844	50,00%
9.2	Értékesítési késedelem (interest loss, sales period)		3 202 487	25,00%
9.3	Kölcsön kamattörlesztés (interest payments)		42 932 331	
9.4	Elvárt befektetett tőke hozam (required return on equity)		20,00%	66 745 000
9.5	Nyereség egységenkénti/profit/unit)			1 565 625
9.6	Összes költség (development costs+profit)			659 583 206
9.7	Befektetés / épített m2 (investment/saleable residential m2)			194 113
9.8	Befektetés/lakás egység (cost/unit)			16 499 530
9.9	maradék telek érték (land value)			293 516 794
	maradék telek érték/m2 (land value/m2)			86 328
9.10	Telek finanszírozás költsége (finance cost of land holding)	20,00%	0,793414	14
9.11	Jelenérték (present value of site)			232 580 310
9.12	nyereség a telken (profit on land)	0,00%	1 000 000	232 580 310
9.13	vásárlási költségek (acquisition costs)	4,00%	1 040 000	3 566 935
10	A TELEK ÉRTÉKE (SITE VALUE TODAY)			223 923 375
10.1	a TELEK ÉRTÉKE (SITE VALUE/M2)			65 460
10.2	JAVASOLT VÁSÁRLÁSI ÁR (RECOMMENDED PURCHASE PRICE)			229 000 000

	8	9	10	11	12	13	14	15	16	17
01	01	01	01	01	01	01	01	01	01	01
02	02	02	02	02	02	02	02	02	02	02
03	03	03	03	03	03	03	03	03	03	03
208	208	208	158	53	01	01	01	01	01	01
04	04	04	04	04	04	04	04	04	04	04
208	208	208	108	58	01	01	01	01	01	01
81	81	81	81	81	81	81	81	81	81	81
108	108	108	108	108	108	108	108	108	108	108
8	9	10	11	12	13	14	15	16	17	18
86 100 000	86 100 000	86 100 000	86 100 000	86 100 000	86 100 000	86 100 000	86 100 000	86 100 000	86 100 000	86 100 000
-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500	-14 587 500
71 512 500	71 512 500	71 512 500	71 512 500	71 512 500	71 512 500	71 512 500	71 512 500	71 512 500	71 512 500	71 512 500
81	81	81	81	81	81	81	81	81	81	81
524 425 000	595 937 500	667 450 000	738 962 500	810 475 000	881 987 500	953 500 000	1 025 012 500	1 096 525 000	1 168 037 500	1 239 550 000
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
-105 625 000	-105 625 000	-79 218 750	-26 426 250	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
-3 782 000	-3 782 000	-3 782 000	-1 896 000	-1 896 000	-1 896 000	-1 896 000	-1 896 000	-1 896 000	-1 896 000	-1 896 000
-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750	-3 228 750
-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525	-2 971 525
-115 517 275	-115 517 275	-89 111 025	-35 252 525	-9 746 275	-10 887 000	-3 228 750	0	0	0	0
22 402 750	22 402 750	22 402 750	22 402 750	22 402 750	22 402 750	22 402 750	22 402 750	22 402 750	22 402 750	22 402 750
7 815 250	7 815 250	7 815 250	7 815 250	7 815 250	7 815 250	7 815 250	7 815 250	7 815 250	7 815 250	7 815 250
-107 702 025	-118 204 525	-81 295 775	-27 337 275	-6 212 275	-19 265 300	-26 704 500	0	0	0	0
118	128	81	38	28	28	28	28	28	28	28
8	9	10	11	12	13	14	15	16	17	18
-21 602 025	-32 164 525	4 804 225	52 762 725	79 887 725	69 037 700	69 195 500	941 750	645 750	0	0
-66 530 535	-93 635 060	-91 892 835	-35 128 110	44 759 615	111 797 315	181 190 815	182 104 595	182 470 315	182 820 315	183 170 315
8	9	10	11	12	13	14	15	16	17	18
0	0	0	0	0	0	0	0	0	0	0
-107 702 025	-118 264 525	-81 295 775	-27 337 275	-6 212 275	-19 265 300	-26 704 500	0	0	0	0
-432 601 378	-555 146 854	-641 936 270	-675 626 039	-688 524 187	-714 420 018	-738 174 100	-764 507 298	-781 237 187	-798 672 204	-816 210 204
0,998	0,998	0,998	0,998	0,998	0,998	0,998	0,998	0,998	0,998	0,998
-4 280 951	-5 493 641	-6 352 494	-6 685 223	-6 813 521	-7 029 584	-7 314 848	-7 577 104	-7 824 250	-8 057 504	-8 280 250
-436 882 329	-560 640 495	-648 288 764	-692 311 922	-695 337 716	-721 469 002	-748 479 949	-765 114 807	-781 570 204	-798 110 920	-814 820 920
8	9	10	11	12	13	14	15	16	17	18
-436 882 329	-567 640 495	-648 288 764	-692 311 922	-695 337 716	-721 469 002	-748 479 949	-765 114 807	-781 570 204	-798 110 920	-814 820 920
0	0	0	0	0	0	0	0	0	0	0
-25 882 996	-37 658 166	-1 548 269	52 076 842	73 074 204	59 948 116	62 090 652	-1 425 643	-6 118 387	-11 811 024	-17 503 660
-91 512 329	-129 190 495	-130 738 764	-78 441 922	-5 587 716	54 312 189	114 471 252	120 015 262	113 276 989	93 749 283	75 211 577
0	0	0	0	0	0	0	0	0	0	0
-432 601 378	-555 146 854	-641 936 270	-675 626 039	-688 524 187	-714 420 018	-738 174 100	-764 507 298	-781 237 187	-798 672 204	-816 210 204
8	9	10	11	12	13	14	15	16	17	18
711 278 555	829 544 080	910 838 855	958 177 110	944 389 385	968 451 685	980 156 185	979 104 425	978 548 685	978 548 685	978 548 685

Profit and Loss Statement

The Profit and Loss Statement is prepared on the basis of the Cash Flow calculation. The most important indicator is the profit after financing, the return on the investor's equity. The risk or sensitivity analysis shows what alterations may take place in costs and revenues in order not to run into deficit.

PROFIT & LOSS STATEMENT		x	
Tanácsadó (consultant)		KOLPRON	
			HUF
Items			totals in HUF
A. Befektetett saját tőke (own equity)	286 050 000		
B. Kölcsön (loan)	-611 643 419		
C. Budget	897 693 419		
I. Bevételek (Revenues)			
Osszes bevétel (gross sales revenue)	1 148 000 000		
ÁFA befizetés (Less VAT)	-194 500 000		
Nettó bevétel (net sales revenue)			953 500 000
II. Költségek (project costs)			
Telek (land purchase + associated costs)	231 196 169		
Infrastruktúra (infrastructure)	12 125 000		
Kivitelezés (construction) + Bontás	528 125 000		
Tervezés (design)	16 562 000		
Irányítás (management)	37 920 000		
Értékesítési kts. (less cost of sales)	43 050 000		
Rezervált költségek (contingencies)	28 715 250	897 693 419	
ÁFA vissza igénylés (VAT reclaim)	-126 993 734		
Osszes költség (Total project costs)	539 503 516		770 699 685
III. Nyereség (cash flow before financing)			182 800 315
Kamat fizetések (financing costs)			-73 682 222
IV Profit after financing			109 118 093
% a bevételeknek (% of sales)			11,4%
% a költségeknek (% of costs)			14,2%
% equity			38,1%
V Kockázatok (risks)			
Profit = 0, ha a bevétel (if sales revenue is)	88,6%	a tervezettnék (of planned)	
Profit = 0 ha a költségek (if project costs are)	114,2%	a tervezettnék (of planned)	
Profit = 0 ha a telekár (if land purchase price is)	147,2%	of calculated	

Conclusions

With this project, the developer aims at entering the top residential market in Budapest. The pipeline study indicates that there is sufficient take-up of new-built apartments in this segment of the market in the district. Both land and for-sale property prices reflect the high value involved with this sector. The high land price reflects the low costs involved with land preparation. This properly zoned the site is fully serviced with off-site infrastructure and has no major other legal or technical difficulties that would prevent or delay construction works to proceed.

The HUF 320,000-square-meter price for the new units is considered to be a good average price level for the property as it enters the market. Forty units as one project seem larger than the average project size in the district. This risk can be managed by phasing the development.

The detailed cash flow analysis shows sufficient return on the own equity. Both on the side of development/construction costs and sales revenues the sensitivity is about 15%, which corresponds with the general inflation level of the country. This is considered to

be the most important risk factor. The developer should find a way to control cost inflation (e.g., through fixed-price contracts) throughout the development period. More analysis should be performed on how this inflation effects the sales prices throughout the development period.

Bibliography

PADCO, Inc. - Polis - 3 : Developer's Handbook for Obtaining Bank Financing, notes, PADCO, August, 1996.

Collins, P.: Planning and Development, notes, The Nottingham Trent University, 1997.

Lloyd W. Bookout Jr. (ed.): Residential Development Handbook, ULI, Washington D.C., 1990.

Neil Carn, Jozef Rabiński, Ronald Racster, Maury Fedin: Real Estate Market Analysis, Prentice Hall, Englewood Cliffs, NJ.