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DEVELOPERS' HANDBOOK

for Obtaining Bank Financing

Prepared by

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- Attachment 1: Loan Application Checklist
- Attachment 2: Land Residual Analysis
- Attachment 3: Public-Private Partnerships for Housing Development

DEVELOPERS' HANDBOOK

The Developers' Handbook was prepared under a subcontract with the Urban Institute as part of the U.I.-PADCO Housing Sector Reform Project II in Russia. It was prepared with the participation of the Cooperative Housing Foundation (CHF) under a separate cooperative agreement between USAID and CHF. The Handbook was prepared by James Hemphill and Kirill Sivolapov of PADCO, David Dunbar of CHF and Alexander A. Vysokovsky of Polis 3.

The Handbook covers a range of topics aimed at helping developers prepare business plans that can be used to complete loan applications for construction period financing. Although it may be used as part of a training course, the handbook is designed to be a 'standalone' document that could be directly used by developers.

To date, construction period finance has not been available to developers for a variety of reasons. The Housing Sector Reform Project II as part of its goals is addressing this issue through two specific sets of activities: the first is to work with banks to help them establish lending criteria and procedures for issuing project-based construction loans, and the second is to work with a series of developers to help them prepare loan applications for financing. During preparation of this Handbook, the team worked with more than 50 developers having projects in various stages of development. Nine of those developers using the techniques described in the Handbook have prepared loan applications and submitted them to banks.

The authors of this Handbook submit it with the intent that it will be helpful to other developers interested in seeking construction period financing for their projects.

1 Summary

1.1 Introduction-Background-Purpose of Handbook

For eight months in 1996, as a part of the USAID funded Housing Sector Reform Project II, a four person team provided the following types of assistance to developers of housing projects:

- project feasibility including assessment of market demand;
- cash flow analysis, credit worthiness, projection and budgeting of project revenues and costs, and preparation of loan requests, to help developers qualify for construction period finance;
- project risk analysis based on project based borrowing, including sensitivity analysis.

The Developer Assistance team worked in parallel with the Urban Institute team providing assistance to Russian Banks in The Program for the Financing of the Construction of Residential Real Estate, headed by Don McCarthy. McCarthy's team helped banks establish lines of credit for construction period finance. Attachment 1 in this Handbook is a checklist prepared for use by banks in evaluating loan applications. Developers seeking construction loans should review this checklist to understand how banks will evaluate potential projects.

This Handbook is written from the developer standpoint; the intended reader is expected to be a potential or presently operating developer. The Handbook will be used as a training tool for developers and also to provide developers with background information, instructions and explanations of specific entries onto cash flow spread sheets for their particular housing projects. It will provide necessary information and steps for developers to take to monitor projects on a continuous basis. The purpose of this handbook is threefold:

- to outline and explicate the project development process;
- to enable reader to produce a business plan and loan request for financing the development of a specific property;
- to provide a plan for management and monitoring of a specific project.

This Handbook does not provide instruction and directions for managing specific projects, but repeated use of cash flow models can be used to monitor and manage projects.

1.2 How to use this manual

The key document is the developer's spread sheet-cash flow-loan request.

It is suggested that the developer begin with the attached Developer Handbook Outline, referring to the comments keyed to each section with accompanying check lists for Market Analysis, Site Analysis and Financial Analysis.

Then, refer to the Profit and Loss Statement and Model Cash Flow, as well as Instructions/Explanations of Actual Conditions in the Russian Economy for assistance in filling out developer's own spread sheet.

Reference should be made to the checklists at the end of Chapters 2, 3 and 4 to assist developers in preparing spread sheets for specific housing projects.

1.3 Summary of Developer Handbook

1. Definition of a developer:

- A Developer is a catalyst, a conductor, a leader, a decision maker. He discovers and identifies a market need and gets control of a site. He then recruits, organizes and manages the necessary professionals, materials, labor and money to meet the market need.
- Skills incorporated in the Developer's professional team include market research, land planning, engineering, legal, accounting, architecture, financial, construction, interior design and selling.

There are two basic development situations:

- A development site searching for a target market. In this case, Developer controls the site and is searching for its highest and best use.
- A target market idea searching for a development. In this case Developer has identified a specific market demand and is seeking a site on which to produce housing to meet it.

In both situations the first step for the developer is to discover and identify the target market.

2. Description of the development process

2.1 Market analysis and feasibility

A. Purposes:

- to understand housing supply, demand and absorption rate in a given geographical area; gather data from the general to the specific, from the macro to the micro;
- to determine both a chosen target market and what kind of development and product to provide;
- to acquire a specialized knowledge of the market, for example, regional preferences and lifestyle characteristics of targeted buyers;
- to provide information that helps sell the project to investors and lenders.

B. Types of market studies:

- General, i.e., nature of the marketplace, competition, economic influences
- Demand based
- Supply based

C. Market analysis checklist: at end of Chapter 2

D. Sources of market information: Chapter 2

E. When to do market research:

- before, for planning and projections;
- during, for adjustments and corrections;

- after, for mistakes made and lessons learned.

F. Importance of market research:

- to identify outcome and process;
- to reduce risk;
- to meet investor and lender requirements.

2.2. Site selection and analysis

A. Three types of site analysis:

- Physical
- Legal-political
- Off-site

B. Analysis activity

- Site analysis tools
- Project design, project costs
- Physical factors
- Site features
- Regulatory requirements
- Off-site conditions
- Application of analysis to master plan

C. Land development checklist: see Exhibit B.

2.3 Financial analysis

- analyze various methods of acquisition (vacant land, uncompleted building, etc.);
- consider private sector financing alternatives, for example: joint venture with land owner; outside investors, etc.;
- consider possible public sector financing. Alternatives, for example: joint venture with City, municipal bond financing, etc.;
- selecting a lender and preparing a loan application to suit particular lender requirements;
- financial analysis check list.

2.4 Product types and relation to market

- What the buyer wants
- General design issues
- Density and pattern
- Matching the product to market need
- Planning is key to success

2.5 Marketing, selling and operation of the project

- How to use the market research

- Estimate product absorption
- Staff up for activity level
- Market strategy
- Merchandising
- Promotion
- Advertising
- Sales management
- Marketing budget
- Construction guarantees
- Construction management

Summary of development process:

To discover and identify a target market, to control a parcel of land, to organize and manage the necessary professionals, materials, labor and money to reach the target market; all according to a development-business-financial plan.

2 Market Analysis and Project Feasibility

2.1 Aims of Market Analysis

Outside Russia market analysis is one of the main component of a developer's work. A thorough market analysis is the basis of the developer's decision to embark on a development project. Similarly, the decisions made by investors and lenders to finance a project are based on careful market assessments. Russian developers, however, use market analysis in a very limited way. Most developers monitor the market only to determine pricing policy for their products; and marketing is based on intuition, not research. They rarely analyze the ratio between demand and supply to substantiate markets for their projects. Of course, they do not make a rigorous systematic analysis of the market and do not keep formal records of the results of such an analysis.

Why is there any need for market analysis? In the most general sense, it is needed to find an answer to this key question: will the planned project be financially successful? When working on a business plan for a commercial construction project, developers conduct market analysis to: first, select the parameters of the project that will ensure a successful sale of the product and, secondly, to get investors and creditors interested in the project.

For developers the most important aims of market analysis are the following:

- to evaluate the state of the market to determine the project's success potential;
- to select a segment of the market with a low level of supply or unsatisfied demand and to work out a housing construction project based on this market information;
- to target a particular group of potential buyers of the products (apartments, offices, buildings, etc.), their preferences and lifestyle;
- to estimate the price and quality of the real estate (housing, offices, etc.) that will be in demand by groups of buyers and to determine designs, purchase of land, etc.;
- to determine the size of supply, demand and the speed of sales of products (level of market absorption) and to decide the scale of construction in a given locality.

Banks and investors need market analysis for making financing decisions such as granting of construction loans. That is why a market analysis must be included in a loan application. In principle, an application requires the same information about the market as a project feasibility study. Although different banks may have different loan application requirements, always an application should include the following concrete information about the market:

- an evaluation of the product offered on the market (for instance, housing units, garages, offices, etc.);
- product type, quality and other characteristics;
- quantity of product offered for sale;
- time during which the product should be sold and speed of sales per unit of time (month, year);
- price of comparable products on the market;
- an evaluation of the site's market value;
- a market strategy.

As a rule, all banks conduct their own market analysis to check the correctness of the data submitted by the developer. If the developer makes a sufficiently extensive market analysis, the bank's check may be limited to a discussion and additional clarification of the initial key parameters and decisions. However, in current Russian practice most of the feasibility studies presented by developers concentrate on the physical characteristics of the project and do not contain crucial substantiations about the real estate market. As a result, the banks have either to fill the blanks themselves or to decline the application. One should always be ready to prove the correctness of one's analysis as compared with the results obtained by a bank.

Reducing a project's risk of failure is an important objective of market analysis. This is important for all sides involved in a commercial construction project: developers, banks, investors and contractors. The more precise the analysis is in demonstrating the project's feasibility, the likelihood of reduced risks is greater making all parties more confident in the project. Similarly, poor quality analysis risks project failure. A well-done market analysis confirming the reliability of the project's market can increase a creditor's trust in the project and serve as a good basis for negotiating lowering interest rates.

2.2 Brief Instructions on Conducting Market Analysis

2.2.1 Feasibility of Project Housing Types

Demonstrate the ratio of demand to existing supply in the city in various segments of the housing market, singled out according to the following features:

- level of housing prices;
- standard of quality of housing (elite, superior quality, etc.);
- size of apartment and number of rooms.

2.2.2 Feasibility of Number of Housing Units Intended for Sale

The number of housing units in the project should be smaller than estimated demand taking into account the project's planned completion time. For example, if the effective demand in the territory under analysis is 150 apartments per annum and competing projects already plan to sell 100 apartments, the market for our project is 50 apartments per annum. If our project has 75 apartments, then the sale of 25 apartments should be delayed until the next year, assuming that market conditions are expected to prevail in the following year.

2.2.3 Feasibility of Spreading Sales over Time

Several trends should be considered in deciding whether to space sales over a longer time. First, the project's speed of sales should not exceed the existing absorption level in the given segment of the real estate market per unit of time. Secondly, when planning sales seasonal fluctuations that are of a systematic and regularly recurring nature need to be carefully taken into account in the strategy. Thirdly, the sales strategy should be based on the logic of the project; the apartments prices may be raised as construction finishes.

The following hypothetical example illustrates the point. If the project strategy is to sell 50 apartments in a year, the speed of sales per month will average five to six apartments. If the market's absorption level is eight apartments a month, the planned speed of sales should be

lower than the absorption rate. Supposing the project intends to sell apartments for only five months (for instance, sales are to be started when the walls and roof of the building are completed), then the speed of sales in the project will be 10 apartments a month. This is higher than the average absorption level. It is quite possible that this plan is unrealistic and will be rejected by the bank. Three solutions are possible here. The first is to increase the project's life-span after the completion of construction by extending the period of sales and reducing the monthly rate of sales. However this strategy may substantially increase ongoing costs, including interest on loans, and expose construction costs to the inflationary effects. The second is to increase project advertising after proving the link between the intensity of advertising and the number of sales per month. Then the application should specially provide for additional sums for advertising. A third solution is to reduce the selling price to accelerate sales, but affect on profitability must be analyzed.

2.2.4 Feasibility of Selling Prices

Market selling prices can only be determined by comparing the project with competing offers having similar characteristics. These prices are not simply the addition of desired profit to estimated cost. A buyer is not concerned with the developer's cost, but only with the value offered in comparison with other houses. In determining market prices all competing products having similar characteristics on the market including the secondary market should be assessed and compared with your project.

To appraise land values; developers should invite independent expert evaluators after first discussing possible variants with the owner.

2.2.5 Feasibility of Land Prices

Testing the feasibility of land prices included in lease payments or in land purchases are an important component of project feasibility. At least two methods can be used to determine whether an owner's land price is in fact a market price. The first method is to compare the price with recently sold comparable properties. In doing so, the list of comparable sales should be drawn from projects that similar characteristics, such as accessibility, location, prestigiousness, attractiveness of the site and existing infrastructure. Residual land valuation is a second method for determining land prices. Essentially, this method compares all aspect of costs for development of the site (assuming that the developer's profit is a legitimate element of the project's cost structure) with expected sales revenues. The difference between total sales revenues from the site and development expenditures, then is the value of the land. Attachment 2 provides a more in-depth description of the residual land valuation methodology.

2.2.6 Project Marketing and Advertising

Marketing and advertising is a relatively new component of project costs in Russia. Thus determining the amount that should be spent on marketing is still difficult to establish. Basically, project marketing should be geared to the expected difficulty in selling units in the project. If there are already many similar projects on the market, a higher advertising budget may be necessary to lure buyers away from these projects. A variety of techniques can be used ranging from newspaper ads, flyers, and sign boards identifying the type of units for sale and where more information can be obtained.

A loan application should provide basic information on how the developer will attract buyers to his project and who the developer expects to buy units in the project. It should indicate the intensity of the sales effort, when it is likely start and when it will reach its peak. Finally, the application should indicate how and when the developer expects buyers will actually purchase their units (through down payments plus progress payment, initial payments and then a final payment upon completion, etc.)

2.3 Explanation of Market Analysis

A market analysis is usually a comprehensive study. Establishing any of parameters described in the previous section require several mandatory operations:

- definition of the project's market area;
- evaluation of demand;
- evaluation of the supply from competing projects; and
- evaluation of the market's absorption capacity.

Let us now study each of these operations one by one.

2.3.1 Definition of the Project's "Market Area"

The term "market area" of a construction project contains two basic concepts:

- First, this is the territory within which any offers similar to the units offered by your project will compete with your project. The key here is the **competition** of projects in terms of their **location** in the city;
- Secondly, this is the territory where there is meaningful demand for housing already under construction. Here, the emphasis is on the **competition** of projects within a certain **demand group**.

In the first case the term market area is introduced to identify rival projects and to assess the number of units of under construction and their sales prices. Each project faces competition from buildings having a similar number of apartments and located in areas of the city that are just as prestigious and valuable, for example, having similar ecology, access, infrastructure, etc. Let us suppose that the apartment house is being built in the periphery of the downtown area. The market for this building will not be rivaled by buildings that are being built in the center of the downtown area or in the periphery of the city. However, it will be rivaled by all buildings that are being built in the middle zone of the city having roughly similar conditions. This means that a buyer with preferences as to the location in the city where he wants to live will be choosing among apartments that are more or less similarly located.

In the second instance, market area is identified as the territory from which demand for the project can be expected. For instance, demand for housing in the downtown area is distributed more or less evenly throughout the city and, perhaps, even in suburban areas. Demand for housing built in peripheral areas, especially of big cities, is usually limited territorially. People who live in the center usually do not want to move to a part of the city that is away from the center. Therefore, a series of demand groups can be identified that will have locational preferences.

Usually, identification of a project's market area is done in consecutive steps: first determine the territory within which you expect competition from other projects and then determine the zone from which you can expect demand of buyers for projects in this territory.

Differentiation of the city area as to value and importance is the main method of identifying a project's market area. As a rule, this is based on factor analysis and by polling various groups. The following factors are important for the differentiation of territory:

- accessibility by public transport and convenience of travel to the city center;
- density and diversity of the network of service and entertainment enterprises;
- accessibility of main employment areas; and
- historical and cultural specificities and traditional social ties.

As an example assume that the nucleus of the downtown area is a single market area for all the projects inside it. Thus the area of demand for such projects is similar throughout the city. In peripheral, poorly developed residential areas the market area for a project may coincide with that of rival projects already on the market. This means that all buildings under construction with identical apartments, are in competition on equal terms despite location inside the territory and that demand for them is limited to this territory.

Real-life situations, however, may be more complex. From the viewpoint of purchaser preferences, in an old peripheral residential area there clearly are two loci - the center of the area and the rest of the area. They can be treated as two different market areas. Demand for a project in the first market area (center of the peripheral area) can be expected not only among residents of this area, but also among residents of neighboring areas connected by a single transport route to the main places of employment and the center of the city. Besides, it is possible that the remaining part of the city will attract a very small part of the demand. The area of potential demand will be smaller for projects located in the second market area (the territory of the area beyond its central part). The bulk of the potential buyers will be concentrated in the area itself, a much smaller part in the neighboring areas and only very few in the remainder of the city.

In all cases when siting your project, a developer should remember one basic rule - the market area of a project will be the greater for unique areas of the given locality (say, natural or historical). Similarly it will be the smaller, the further your project is from the city center. According to this rule, peripheral areas of the city with unique living conditions (for example, a full set of modern conveniences) will have a higher rating and a market area equal almost to the entire city.

Over time the attraction of particular locations and, correspondingly, market areas of projects change. A farsighted developer should sense these changes in demand and exploit them for his projects. The main factors determining a change in the attractiveness of a location for a project are the following:

- growth of available jobs;
- appearance of new highly-paid professionals;
- changes in daily labor migration patterns resulting from the construction of large housing estates and big enterprises;
- development of urban infrastructure; or

- appearance of a new prestigious facility (firm, institution, trade, cultural or entertainment enterprise) in a new or reconstructed building.

To identify project market areas precisely, sample polls should be conducted of various groups of potential buyers. If conducting polls or interviews is impossible, five to six realtors should be interviewed to elicit their expert views about prices and preferences in the primary and secondary markets in different areas of the city.

2.3.2 Study of Demand

Housing demand is studied to know precisely how many buyers in the market, what do they want to buy and how much will they pay for housing.

There are two kinds of demand - potential and effective. The first type of demand is more of a qualitative nature: it records preferences of potential buyers, say, by type of housing units, location and prices. Effective demand has yet another important quantitative characteristic - it shows the number of buyers with money to buy the housing they want.

Knowing demand and supply is crucial for the developer. The success of a developer depends precisely on his knowledge of demand and his ability to offer the market a number of units that can actually be bought while still maximizing profits.

Demand for housing is determined by many factors. The following is a partial list of these factors:

- socio-demographic factors (sex, age, marital status, size of families);
- economic factors (levels of income, prices of housing, availability of credits for the purchase of housing, inflationary expectations);
- structure of existing housing; and
- volume of migration and the social characteristics of migrants (levels of income, cultural specificities regarding the type of housing, family size, etc.).

As a rule, developers deal with a certain group of buyers called a "demand group" or groups of individuals, families or firms, singled out according to common features connected with their desire to buy certain types of housing. The main features of a demand group are as follows:

- the price that members of this group are willing and can pay for housing;
- preferences concerning the type, quality and location of this housing;
- average income level typical of members of this group; and
- other socio-demographic and economic characteristics, for instance, size of family, number of children, occupation, etc.

Of course, the features of various "demand groups" differ and may not have precise geographic boundaries. In practice working with the nucleus of a "demand group" is sufficient to reflect the unique features of the group.

The following example illustrates demand groups definition in Russian cities.

A stable and big demand group is formed by families that prefer to buy inexpensive or average housing. As a rule, representatives of this group have the following main preferences:

- the price that they are prepared to pay; for instance in Nizhny Novgorod, prices of about 350-450 dollars per square meter;
- they prefer apartments, not houses;
- they are prepared to buy apartments with standard layouts;
- usually they buy three- and two-room apartments; and
- they do not have any particular locational preferences in the city, but demand that the house be within a "good" local environment and have good transport access to the downtown area.

This group is quite varied in its social status. It is formed of the following types of families:

- people wishing to improve their housing conditions by selling their present apartments and paying additional money to buy a new one;
- migrants from other cities who sold their apartments there and have savings to make the purchase;
- military personnel who have been given special allowances to buy housing; or
- senior personnel of big enterprises who are given loans on easy terms to buy housing.

Families that buy quality housing form yet another demand group. In Nizhny Novgorod they are prepared to buy housing at a price ranging from 850 to 1100 dollars per square meter. They prefer innovatively designed, small buildings built of traditional materials located only in the best, central part of the city. The buildings should have not more than five floors, preferably 3-4, and be in a very good state. This group prefers buying big apartments (three or four rooms of 100-120 square meters). As a rule, they are natives of the city and hold senior positions in firms and financial institutions.

When working with various demand groups, several rules should be kept in mind. First, the size of a demand group is in reverse proportion to the price and quality of housing being demanded. In other words, the higher the price that a particular demand group is willing to pay, the smaller is the group. And vice versa -- the more average and standard are the preferences of a group, the bigger it is. While this is the general rule, specific "niche" markets exist at all price levels.

Classification of buyers by demand groups is very important for the developer. This helps him better target the type of buyer he is dealing with or is planning to deal with. It is also useful in planning, in marketing and advertising the project. One of the main talents of a developer is to find a group of unsatisfied demand, to understand its preferences and to find ways of conveying to the group the necessary information about his offer.

A classical analysis of demand is conducted on two levels. At the first level, demand for a particular type of real estate is determined on the scale of the entire city. Then changes in demand over time depending on various factors are monitored to forecast the total capacity of the market. This is important because very often different segments of the market may be in competition and demand may flow from one sphere to another. To illustrate, demand for individual residential houses may be replaced by demand for big apartments or townhouses.

The following case study is an example of such differentiation. Let us suppose that total demand in the city amounts to 6,000 housing units of all types per year. It is expected that 3,500 families will try to buy housing on the secondary market and 2,500 on the primary market. Primary demand maybe further broken down according to various types of apartments, cottages and townhouses. Let us suppose that the resultant proportions are as follows: 2,375 families (95 percent) want to buy apartments and 125 families (5 percent) want to buy separate houses. Among the former the following territorial distribution of demand is expected:

- 10 percent intend to buy an apartment in the downtown area;
- 25 percent intend to buy apartments in the middle part of the city closer to the downtown area;
- 35 percent intend to buy apartments in the middle part of the city closer to the peripheral area;
- 30 percent intend to buy apartments in the peripheral areas of the city.

One should not forget that in this example we are dealing with effective demand, with people who know the housing market, know the prices of apartments and have calculated their financial possibilities. Differentiation in terms of price, quality of preferred housing, the size of apartments and other parameters is carried out in the same way. Still, price levels for apartments should be the main characteristic for differentiating demand.

The absence of primary information is the main problem of evaluating demand in Russian cities. As different from Westerners, Russians do not reveal their real incomes, at least in recent times, because of problems with taxes and rampant crime. Besides, people are uncertain about their incomes because of the extremely unstable situation. As a result, they cannot estimate their income for past periods or forecast their income for even a relatively short period of two to three years, let alone lengthy periods of 10-20 years, as it is practiced in the West when granting mortgage loans. Also, realtors often do not keep records of transactions, hand over all the documents to the owners of the apartments and do not exchange information about transactions among themselves or with special professional associations, as it is done in Western countries. To be more precise, the gleaning of such information is very expensive and developers generally are not yet prepared for such spending. Yet, some developers have managed to organize a regular analysis of demand.

There are several methods of studying housing demand. Let us briefly describe each of them.

a) Studying demand through the press

The local press provides one of the best sources of information about the real estate market. In Moscow and St. Petersburg, general purpose publications offer ample information about the current supply on the real estate market. In addition, specialized real estate magazines provide in-depth market information. These publications offer surveys of the current situation in various segments of the market, and analytical articles studying trends in the development of the urban real estate market. Unfortunately, these publications do not pay enough attention to the questions of demand for various types of real estate, including housing as their advertisements and reviews deal mainly with supply.

Professionals working in real estate markets should keep in touch with the local press to monitor housing prices in various parts of the city. Information obtained through such sources should be graphed to calculate average prices per district for each type of product and to track of price fluctuations. This information should be verified on a selective basis by telephoning advertisers to find out to which sector of the market a given product belongs and determine the difference between advertised prices and actual prices sales.

Real estate agencies specializing in real estate information can provide another, relatively inexpensive, source of information about the market. Several such agencies across Russia have already been monitoring the market on a regular basis. They may provide regular reviews and specific information on supply in various sectors of the market.

The Russian Guild of Realtors regularly publishes information on the real estate market showing broad trends, changes in price structures and regional variations. While too generalized for assessing the market for individual projects, the Guild's publications can provide valuable insights into broad trends affecting the market as a whole.

b) Studying demand through sample polls

Sociological polls provide the most widely used method of studying demand. However, such polls can be effective only if they are conducted by professionals, for their seeming simplicity conceals many subtleties that are critical to the poll's success.

Several Western works study statistical relationships between various parameters characterizing the families who have bought apartments. They have also established a statistical relationship between the age of the head of the family, the main breadwinner of the family, his income and the probability of buying an apartment. In Russia, the results of polls should also be used to try to detect the probability of a demand group of buying a new apartment. These relationships are necessary to forecast demand based on the current results of polls.

Conducting polls is costly and therefore can hardly be justified for the majority of small and medium-size projects. As a rule, such polls are most effective for consumer goods, but are poorly suited for studying demand for a small project. Only large ambitious projects can provide sufficient funding for such polls.

c) Studying demand through target groups

A careful search for target groups viewed as hypothetical buyers of new apartments may be more satisfactory. Such groups may include well-paid employees of various companies and banks, foreign specialists interested in buying or leasing housing, groups relocating from other cities or former Soviet republics, and groups that receive special state subsidies to buy housing (for example, the military from ex-Soviet republics). The search for and identification of such groups constitute a separate special task. Surveys of real estate markets prepared by specialists and analytical articles may help achieve the goal. Other methods of studying demand also exist. The scheme used by one of the St. Petersburg banks can serve as an example:

First stage. The bank models the income in the city based on:

- an analysis of distribution of individual deposits;
- an analysis of distribution of legal entities' deposits; and
- the status and size of the bank among other banks in the city.

Second stage. Information about income is then compared with information about the employees of the bank who have bought apartments and its clients who have applied for mortgage loans. Based on this, an empirical relationship between income and purchases of housing is established.

Third stage. Statistical data on a specific bank is then extended to the entire city, taking into account available information about the activity of other banks.

Such a scheme gives only very rough results, but at least it helps developers avoid serious errors in forecasting possible sales. As a rule, studying demand through target groups interviews, not anonymous questionnaires, are used.

d) Studying demand from city statistics on the commissioning of new housing.

Because of the lack of sufficient primary information, a rough estimate of demand can be made from data specifying the housing built and sold on the market in previous years. Such an approach is based on the fact that supply in two previous years substantially exceeded the effective demand. Therefore, it is possible to assume that the families that wanted to buy a house bought what they wanted, thus meeting their entire demand and making effective demand approximately equal to the number of people who have recently bought apartments or houses in the city.

Initially information should be obtained from city authorities on the number of housing units commissioned in the past two or three years. Next the developers who actually commissioned the housing should be contacted to determine the amount of housing sold at market prices and the amount sold at subsidized prices. From those figures, historic trends in changes in demand can be determined.

Table 2.1
Housing Commissioned in City in Last Two Years

From the following table, it is clear that market sales are increasing while units sold at subsidized prices including those provided to waiting lists are declining as a percent of total units. Equally clear is the fact that housing sold at market prices is increasing at a rate faster than that of total housing indicating that private investment is playing a more important role in total housing production.

Two year trends are probably not indicative of a permanent change in the composition of housing production. Longer trends are normally needed to project such a change. In Russia, however, due to the recent nature of market reforms, long term trends are just emerging and developers must supplement trends analysis, such as is shown in the table, with additional research.

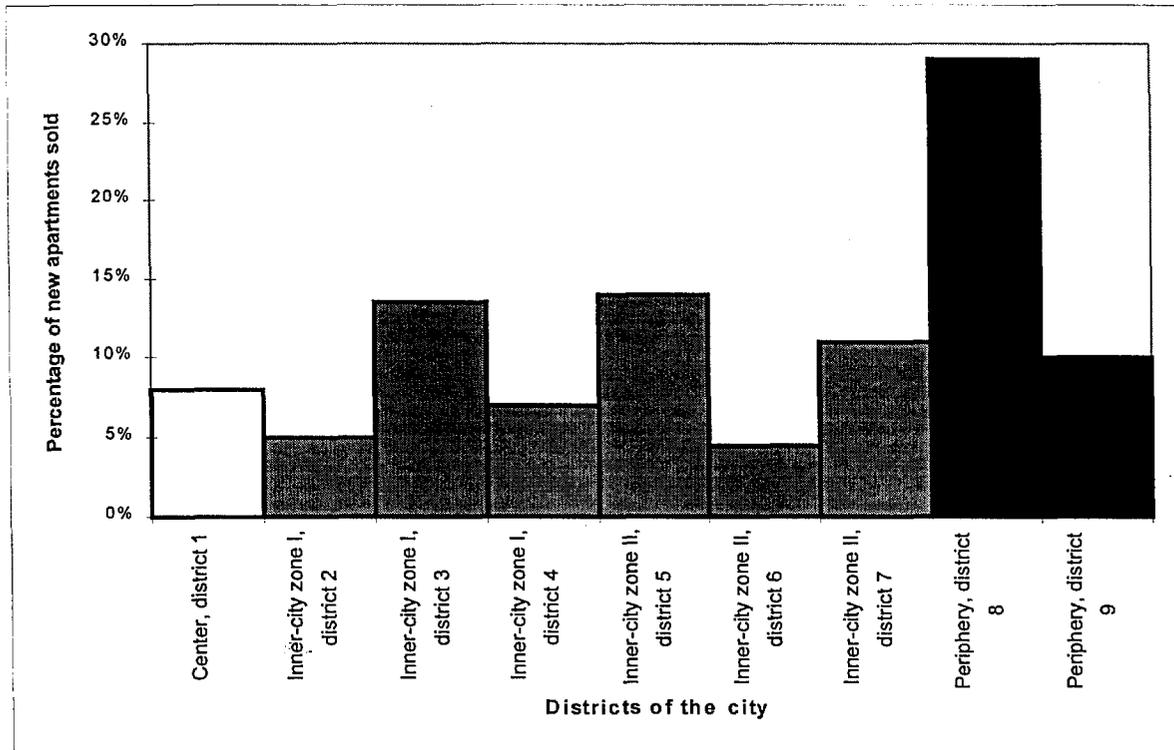
Category of Developers	Amount of Housing Built			
	1994		1995	
	Units	%	Units	%
Capital Construction Department				
- Sold at market prices	0.00	0%	45.00	1%
- Sold at subsidized prices	730.00	16%	407.00	8%
Developers (apartment houses)				
- Sold at market prices	3,500.00	78%	4,000.00	81%
- Sold at subsidized prices	270.00	6%	380.00	8%
Developers (individual houses)				
- Sold at market prices	--		85.00	2%
- Sold at subsidized prices	--		0.00	0%
Total units sold in city	4,500.00	100%	4,917.00	100%
Number sold at market prices	3,500.00	78%	4,130.00	84%

Data on secondary sales from the Bureau of Technical Inventory (BTI) is one possible source that could be used to collaborate trend analysis. This can be done by determining the number of transactions carried out in the secondary market using BTI data on the number of units registered in a particular year. In some cities, this data is maintained by special registration centers, in others by the BTI. Sometimes buy/sell agreements are separated from overall statistics of registered transactions.

From this type of information, a developer can determine the number of sales on the secondary market and combine this figure with total sales to get a picture of the total number and value of transactions in primary and secondary markets. These city-wide figures should be broken down by district as is illustrated in Figure 2.1. In it, the center of the city accounted for 8 percent of all sales, the middle part of the city 54 percent and a new district on the fringe (NO. 8 on the figure) where mass construction was carried out for 30 percent or 750 units. In another peripheral district where there were no large-scale projects, about 10 percent of the city's total number of units were sold. Since this district is relatively uniform, the past level of sales in this peripheral district is probably fairly close to total demand for housing in the district.

Figure 2.1
Breakdown of New Apartment Sales by the District

The balance of effective demand must be determined through monitoring sales from new construction. Monitoring construction gives the developer an idea of the new sales in a



district. This type data is fairly cost effective since it is either free or provided at minimal costs.

e) Studying demand through one's own performance

Determining demand based on past sales is the most affordable kind of analysis for developers. It may not be quite good for studying demand in the whole city, but this is not very important for the majority of medium-size projects of local importance. The mechanism of such an analysis is very simple -- analyze your own experience of sales under previous projects to determine demand and then apply the results to the current period. To make such an analysis you will need to reconstruct the previous sales experience, if you did not keep account of your past transactions, and start keeping statistics for all current sales. The scheme looks as follows:

- keep account of all applications to the company and of all negotiations concerning the purchase of proposed products (for example, apartments, offices, etc.). Then calculate the number of applications per week, per month, per year. Next find out where the customers got information about your firm's products to assess the effectiveness of the methods used to advertise products, conduct market research and keep potential buyers informed of products on the market;
- keep account of all apartment sales agreements concluded per week, per month, per year;
- keep account of all payments made for each agreement per month;

- use the above data to draw diagrams of monthly fluctuations in demand for your company's products, to detect sales/applications statistics and estimate cash flow from concluded agreements. Special attention should be paid to seasonal fluctuations. In the summer sales may sharply decline only to surge again by the end of the year;
- if possible, compare sales from several projects to determine which type products sell the fastest and at what terms of sale, price and other factors;
- these sales statistics for the previous year should be extended to the current year, using the analysis results as the key factors that determine demand, such as projects creating many new jobs, stabilization of (increase in) inflation, etc.

All methods are good for studying demand. Different methods could also be combined. For example, you may conduct precise and careful interviews with buyers to get information that may help you analyze demand. However, the most effective way is to exchange sales data with other real estate companies and developers under a mutually acceptable scheme that ensures the necessary level of confidentiality.

2.3.3 Analyzing of Competing Offers

A consistent analysis of supply across the city with a gradual itemization by the site, price and type of housing is the traditionally correct approach for studying supply. Such an approach is particularly important at pre-project stages when the developer is looking for a "niche" on the market.

Information about competing projects can be obtained from many sources, such as:

- advertisements in the local press;
- trips to their construction sites; and
- official sources in the city administration about current and planned construction projects.

As a rule, one has to use all available methods to obtain such information that can be divided into several categories:

Table 2.2
Analysis of Competing Projects

Indicators	Project/Location		
	Project 1	Project 2	Project
Commencement/end of construction			
Number of units under construction			
Number of units sold			
Average estimated number of sales per month			
Average actual number of sales per month			
Selling price per 1 sq. m. of floor space			

This information should be used to:

- determine the period of sales of competing projects and find out if this period coincides with the planned sales under your project;
- calculate how many units of the same quality and price will be sold on the market by competing projects concurrently with your own transactions;
- compare the estimated and actual speed of housing sales from competing projects and your project; and
- compare prices from competing projects and your project.

2.3.4 Evaluation of the Market's Absorption Capacity

The market's absorption capacity is the number of housing units that can be sold on the market in a certain period. For example, the phrase "the absorption level of the city's market is 100 apartments a month" means that only 100 apartments are likely to be sold on the city's free market over a period of one month under normal conditions. Naturally, absorption should be determined not only for the city as a whole but also for its districts.

In using this important indicator, two key concepts should be kept in mind:

First, the period during which most of the apartments are sold is a key element of the market absorption concept. Supply and demand can be determined for various periods. In preparing a request for a loan, a developer should give a breakdown of sales by the month. Thus all analyses of supply and demand should cover the same period.

Secondly, the level of absorption differs from the speed of sales from specific projects and represents an average statistical indicator generalized from experience.

Here is an example of calculating the level of absorption.

To illustrate the following figure presents a hypothetical calculations of absorption capacity:

Let us assume that we are evaluating "**Project A**" which calls for the construction and sale of 60 apartments. Construction begins in the third month of the year and lasts 14 months. Sales begin in the seventh month and last 10 months.

Table 2.3
Estimating Absorption Level

Projects	Number of apartments sold per 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				60 (36)
Competing project B			8	8	8	8	8	8	8	8	8	9	9						90 (81)
Competing project C												7	7	7	7	7	7	8	50 (7)
Competing project D	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 level of absorption	16	17	16	17	16	17	16	17	16	17	17	17	16	17	16	17	17	17	300 (200)

Within the same market area three more competing projects with the following parameters are being carried out:

Project B contains 90 apartments for sale. Construction began last year. Apartments were offered for sale since the third month of commencement and are expected to be sold within 11 months that is by next January.

Project C has 50 apartments for sale. Construction will begin in the seventh month of the year. Sales will begin in December this year and will continue through the first half of next year.

Project D intends to place 70 apartments on the market. The project was finished last year and 25 apartments have already been sold. All sales are expected to be completed within the first five months of the year.

A comparative analysis of all these projects shows that their construction coincides with our own project. Sales under Project B and Project C also coincide with our project.

Now, let us calculate the speed of sales from our project and competing projects. First, divide the number of apartments by the duration of sales, assuming that the same number of apartments is sold every month. In practice sales drop in summer and rise again at the end of the year. To simplify calculations, Table 2.3 shows an even rate of sales despite this known trend. Later after conducting a preliminary analysis of absorption capacity, seasonal fluctuations can be re-introduced as a refinement. Next the number of apartments likely to be sold every month within

a given area can be gauged. These estimates are shown in the second row from the bottom of Table 2.3.

Finally, we know that within this market area (a peripheral district) annual sales over the last two years were practically the same -- 200 apartments a year or 16 to 17 apartments per month. The average speed of monthly sales over the period is shown in the bottom line of Table 2.3.

Next the marketability and feasibility of Project A can be estimated by comparing the estimated monthly sales with the average market absorption. During our project's entire sales period, the total number of apartments offered for sale under all projects is smaller than the average absorption level, except December and January. Thus our project, other conditions being equal, will be as competitive as the others and will have sufficient demand to satisfy our sales schedule.

After comparing our project with the absorption level, minor corrections should be made in the sales plan to increase sales to eight from month seven through month eleven. After that sales should be reduced in the critical last month of this year and the first month of next year.

Based on these parameters, an advertising and sales management strategy can be more confidently devised.

2.4 Feasibility of Land Prices

In the past, developers obtained land from city authorities under lease agreements limited to the construction period and, sometimes, for longer periods. The lease includes land development financed on a contractual basis. In addition, the developer pays lease payments during construction.

This section of the handbook deals only with "feasibility of payment for land", meaning a one-time payment for the right to lease and develop (use) the plot.

As a rule in Russia, the developer leases land from city authorities in return for providing a certain percentage of apartments for city waiting lists. This payment in kind is considered as compensation for the city budget expenses incurred by the construction of infrastructure facilities (sewage, water, power, heat supplies, etc.). The developer makes this payment as apartments at the final stage of the project when the building is ready for acceptance by local authorities.

The amount of such one-time payment ranges from 12 to 20 percent of the total floor space built (except in Moscow and St. Petersburg). If such a deal satisfies the developer, everything is fine. However, very often the payment for land requested by the city authorities turns out to be too high, depriving the developer of the profit he seeks and making the entire project infeasible. For example in one city, local authorities have determined the price of land leased for three different projects -- one in the center of the city, another on the border of the middle part of the city and the third one on the periphery -- using the same one-time payment set at 14 percent of the total floor space to be built. Obviously, such an approach was acceptable for the project in the center of the city, but could ruin the project on the periphery.

It seems that the developer should have some basis on which to estimate the market price of land for "bargaining" with the city authorities or other land owner. Naturally, all parties to this process

have a very general idea of differences in the price of land in various parts of the city. However, when rights are actually being acquired, more accurate estimates are needed.

There are two principal methods of determining the market price of a specific plot of land. Always keep in mind that forecasting prices is complicated without an effective urban land market.

a) Using the residual land value method to estimate prices for a plot of land. This method compares expenses incurred by a construction project and expected sales revenues. The concept is described in detail in Attachment 2. Briefly however the first step is to calculate the costs of your project including expected profit. Then subtract this amount from the expected revenues from sales. The difference is the expected land price. If this result is negative or substantially less than the price the owner is asking the project is probably not feasible as it is designed or the land price is too high.

If the results of the residual land value analysis show that the payment requested by the owner is unacceptable but the developer still needs that plot of land, he could try following method described below.

b) Using comparables to determine land prices. Here, the price of a plot of land is determined by comparing the land prices from similar, recently concluded sales. Such sales may be concluded between owners, between the city authorities and other developers, between a bank and borrowers, etc. When doing so, the developer should take into account that factors other than just location may affect price differentials. Some of these key factors might be:

- location (distance from the center and transportation routes, distance to the nearest public transportation terminal, distance from major enterprises and organizations, etc.);
- ecological safety;
- attractiveness of the territory from the point of view of social, historic, natural and architectural environment;
- distance from public and utilities services, including schools and preschool institutions.

During price negotiations with the owner, the developer should arm himself with prices from comparable deals. Then using comparable price information, the developer should try to negotiate the best deal from the owner.

In determining the price of a plot of land, an independent appraiser specializing in the appraisal of urban land prices can be invaluable in obtaining better price information. Before inviting the appraiser, consult the land owner for his approval to ensure that he recognizes the results of an independent evaluation as a basis for negotiations between the concerned parties.

2.5 Marketing Strategy and Project Advertising

The main purpose of market research is to answer: how can a product be sold and what advertising would be most effective? Another purpose is to learn as much as possible about the wants and needs to your target customers. The difference between market research and a regular market analysis becomes particularly evident when it comes to the sale of real estate that is new to the market. Marketing strategies should be developed simultaneously with the project and based on the results of a market analysis.

So far, developers in Russia have underestimated the importance of market research. This is manifested in the lack of funding for market research and advertising for most construction projects. Such a strategy can be possible only if there is continuous supply and sales remain stable. However, many projects have failed to attract investment or individual buyers. In such a situation, careful market research and advertising can reverse poor sales performance.

Market research is not only precise knowledge; it is an art. There are no simple formulas that can be applied to every project. Therefore, we will confine ourselves to only a few general recommendations.

A marketing strategy should answer the following questions:

- How will potential buyers learn about the real estate being offered for sale?
- How can a buyer be attracted to the project and be encouraged to buy units in it?
- How should an advertising campaign be conducted as part of the project's general development strategy?

The type of marketing research depends on whether the product being offered is already available on the market or it is a novelty. The answer to this question provides insight into the best marketing strategy. If the real estate that the developer is selling is already available on the market, market research should be directed at the identified groups of buyers. Then the developer should conduct a standard advertising campaign to "snatch" initiative from competing projects. If a new product is being offered, more sophisticated market research should be undertaken to encourage demand for the product. The campaign should gear market research to special "advanced" groups of buyers and the developer's principal strategy should be to build models to demonstrate the new features of the project.

In addition, the strategy must determine how potential buyers are going to pay for the new housing. Investors, as a rule, are prepared to pay the entire amount up front to fix the price. Often future owners prefer a discount on their down payment and agree to pay the balance in instalments being aware that the price will increase during the construction period. The method of payment affects cash flow throughout the project. This issue is explored in detail in Chapter 5 which deals with the financial aspects of a request for a credit.

Assisting potential buyers in selling their own apartments on the secondary market and investing the profit in a new apartment can also be a successful marketing strategy (this was one of the strategies used by the company Zhilishchnaya Initsiativa).

Project advertising is a crucial element of a marketing strategy. The advertising methods are chosen depending on the group of buyers for which the developer aims to serve. To illustrate, advertising in Kommersant would be more effective for one group, while for another group the same effect could be obtained through advertising in the local evening newspaper. There are also special groups of buyers for whom advertising in the mass media proves absolutely useless. If the developer wants to attract investors from industry, especially from outside the city, targeted advertising would be the best solution.

2.6 When should Markets be Studied?

Market research should be conducted throughout the entire project. However, its emphasis varies from one stage to another.

At the initial stage, market analysis is conducted before the commencement of the project. This is the most important, "base," market analysis because it provides the basis for the development of the entire concept of the project. At this stage a developer should choose the type of product to be offered on the market, estimate its possible selling price and determine a preferable development site. Only a thorough market analysis can determine whether the site should be bought and at what price. The results of such an analysis are indispensable at the initial stage of the project for defining all design requirements and technical documentation. All these decisions, such as the buying price of land, a design assignment and the designing process itself, infrastructure expenses, etc., should be based on market analysis. In addition, a market analysis is needed to substantiate your loan request, to attract investors or to find other sources of funding for the project. The results of market analysis should be used to design market research and advertising strategies.

When the project enters the construction and sales stages, the marketing strategy should focus on a sales strategy. At this point, market research should be used to make appropriate adjustments in the project and ensure that the end product meets buyer requirements. At the construction stage, based on the results of interviews with buyers and other information about them, changes may be made in the apartment design to satisfy individual buyers or the sales schemes might be made more flexible.

The last stage of market research begins upon project completion. Then the project results should be analyzed to identify the lessons learned during the project. These can be valuable to avoid making the same mistakes in future projects and in devising future project development strategies.

The attached Market Analysis Task List summarized the point just discussed and can be used as a guide in developing project market analysis (See Exhibit A).

EXHIBIT A
Market Analysis Task List¹

Description of Market Area

- Size (total population)
- Topographical features
- Transportation arteries, ease of access
- Direction of recent growth
- Special features, characteristics and considerations
- Community development planned or in process
- Map of area

Economics of Market Area

- Brief history of growth and development
- Analysis of office and retail markets, strengths and weaknesses
- Employment: types and trends
- Principal employers
- Unemployment: current levels and trends
- Average family income: current levels and trends

Demographics of Market Area

- Distribution by age
- Distribution by education
- Distribution by household size
- Special features, for example, military-connected household

- Current estimate and future trends

Conditions of Market Area

- Housing supply: characteristics by type and structural condition
- Residential building activity: current and planned
- Description of comparable competitive projects: number of units, size, rents
- Absorption of comparable projects (by month, by year)
- Tenure of occupancy: current estimate and past trends
- Vacancy rates: owners and renters
- Mortgage market: activity and sources of funds
- Sales market: volume, prices, inventory, and outlook
- Rental market: existing/new, prices and outlook, volume

Demand for Housing

- Projected increase in types of households
- Locations favorable for market absorption
- Occupancy potential for subsidized/nonsubsidized multifamily units

¹ Source: Adapted from U.S. Department of Housing and Urban Development, "How to Design a Rental Rehabilitation Program" (Washington, DC: Author, 1985)

3 Site Analysis

3.1 Introduction

In a loan application, a careful site analysis should be presented to highlight the strengths of the project and demonstrate an in-depth knowledge of the unique costs of developing the site. Thus the two main reasons for site analysis are: to analyze the affect of the different characteristics of the site on the possible market for the project and determine site development costs. The first was partly covered in the previous chapter. Site analysis should be used as a marketing tool to point out the site's unique features. If the analysis shows that a potential site has strong disadvantages from either marketing or cost points of view, alternative sites should probably be selected.

Throughout this section the site analysis check list will be referenced. It lists all the necessary information to be included in loan application. In an actual loan application, there is no need to include all detailed information on the site such as all physical specifications or detailed design drawings. The loan application should show that the project is feasible and that all approvals are in place (or that the few that are missing can be obtained easily). The information presented in this portion of the application should be brief, clear and should provide enough details to prove the success of the project. Basically the application should cover the items listed in the site analysis checklist. All approvals should to be referenced in the loan application.

Site analysis is divided into three major components:

- **Physical analysis of the site.** Logically, the first step in site analysis is to decide if a prospective site has physical features that will improve the marketability of the project. After determining if the site can be marketed, the next step in physical analysis is to estimate the costs of developing the site and the effect these costs would have on total project costs, and thus project profits.
- **Legal-political analysis of the site.** The next component of site analysis should cover the legal status of the site and include all political and legal factors, including all fees and exactions required to allow development of the site. The method of site procurement and the costs of the procurement should also be covered here. Typically, these questions should be asked: Will the land be purchased? Will development rights only be obtained? Will the site be leased, and for what period? What requirements of the local municipality must be met?
- **Off-site analysis.** The final part consists of analysis of the adjacent land conditions including: physical, political, etc. , and existing uses on adjacent properties that would affect the use of proposed project sites.

3.2 Physical Analysis of the Site

Normally, a loan application should include generalized information about the site including a location map, a plan showing the location of buildings on the site and a description of the general

characteristics of the site. Detailed plans and physical analysis should be retained by the developer for future reference and project implementation, but are normally not included in business plans or loan applications. Typically, the summary information should be included:

- Site location and boundaries. The exact size, shape, and plan of the plot of land and its location within the city and regional boundaries should be presented. This information may be presented on several pages, and to the extent possible all plans should be at the same scale.
- Topography. The elevation of the site should be analyzed along with slopes, ridges and any special features that may influence the cost of development and demand on constructed housing.
- Soil conditions should be analyzed to estimate the cost of the earthwork and type of foundation to be used.
- Environmental characteristics. Possible sources of pollution of the site should be evaluated since these may have negative effects on the ability to market the site. Positive environmental conditions such as views, access to natural areas should be highlighted to show the desirability of the site for future purchasers.
- Existing status of the site. Are there any buildings to be removed or debris to be cleaned from the site? The cost of the cleaning up the site should be estimated as accurately as possible. In existing urban sites it is very likely that old buildings must be demolished and the existing tenants of these buildings relocated. These costs should be included in the site analysis since they may have an impact on project feasibility. As appropriate relocation plans should describe the process and costs for relocating existing tenants to new housing if the site has existing tenants who will not remain on the site.
- Other natural conditions such as wind direction, access to water resources, etc. should be indicated since they may improve the demand for housing on the site.

3.3 Legal-political Analysis

Legal-political analysis of the site should cover the current status of the site and possible ways and costs of procuring the site. Questions should be answered such as who is the current owner of the site and what type of the rights does he has on the site, and what type of rights will the developer have once the site has been procured.

The next important question concerns the method of site procurement and its costs. With the transition to a market economy these questions become more important. Formerly the distribution of sites was centralized and allocated free of charge. Now land may be sold to developers through auctions or tenders. Thus the costs of procurement become a crucial issue due to its influence on the cost of the project.

Recently, several new ways of site acquisition have been introduced in cities throughout Russia. Now land may be obtained through tenders for development, auctions or outright purchase. Since costs may differ, developers need carefully to consider the impact on project feasibility of different acquisition methods. For example, obtaining full ownership rights may improve the marketability of the project since clear title can be sold to potential buyers increasing security of tenure. In addition, full ownership rights may make it possible to use the project as collateral for construction loans improving the developer's ability to obtain project financing.

Land Lease

Leases can be short-term (usually covering only the construction period) or long-term (25, 49 or 99 years). Short-term leases are popular with developers who do not intend to rent apartments once construction is complete. Once housing units are sold to purchasers, lease rights for the site can be passed to the condominium association or other legal entity owning common elements of the building. The main advantage of short-term leases is the likely lower cost to the developer. This is generally the least expensive method of getting access to a site.

Lease rights can be obtained through a contract with the current owner of the land -- in Russia usually the local administration. With the development of real estate markets, lease rights can be auctioned or tendered. With proper legal safeguards, construction period leases may be an effective, cost-efficient way of obtaining control of the project site. However, leasing a site instead of owning it may affect the developer's ability to finance site development. Typically, banks will not allow short-term construction period leases to be used as collateral. However, properly drafted long-term leases may be recognized as project assets and thus accepted as collateral.

Ultimately as real estate markets develop, full ownership will improve a developer's ability to finance his project and convey clear title to purchasers. Now, however, the benefits of full ownership rights to a developer are not much greater than those of long-term leases.

Both types of rights can be sold to a developer through auctions or tenders or through direct negotiations with local administrations. As more enterprise land is privatized, this will provide a source of privately held land that can be purchased or leased from private owners rather than the local administration. This plus land auctions will provide a source of privately held land that will offer developers much more freedom in structuring land rights acquisition agreements than was possible in the past. Before completing agreements for acquisition of rights, the developer should determine the financial impacts on his project of different rights acquisition procedures and attempt to negotiate the highest level of rights that meet the project's financial and development strategies.

Lease rights are normally stated in lease agreements. Sometimes short-term lease rights can be extended or converted to long-term lease rights. In the land auctions in Ekaterinburg, short-term rights were granted to the developers who won the auction. At the time the rights were granted, the lease agreement stipulated that lease rights could be converted to full ownership rights once the laws of Russia permitted such a conversion. In other instances, construction period rights can be converted to longer-term lease rights when special circumstances are met, for example, when the site is successfully developed.

Usually lease rights are not free of charge. The developer is supposed to pay a fee for the right to lease the land besides annual lease payments. Often the process for determining initial lease payments is quite complicated. In Moscow, for example, the only way to get access to a site is to lease it. The payment for the right to lease can be very high. After expiration of the initial lease, the leaser must pay a new fee for the right to prolong leasing the site. Usually these new lease payments are higher than the initial payments. At each change in lease payments, the developer should recalculate the impact that the increases are having on development costs and ultimate marketability of the units for ultimate sale.

Down payments for the right to lease land can be replaced by an investment contract with the local administration. According to the terms of these contracts, the local government provides land for the development and the developer provides a percentage of the developed project to the local administration free of charge. If the developer wishes to retain these units, he usually have the right to purchase the administration's units at cost. This procedure eases cash flow since unit payments are normally made when the project is complete. Otherwise, developers must pay down payments before design work is complete and construction has not yet started.

Tender for construction sites

When the local administration tenders an existing site, the types of rights to be conveyed are usually specified in the Invitation for Bids. Bid documents usually provide preliminary information on the physical aspects of the site and the type of development permitted on the site. The local administration and the local architectural committee normally provide information on the size of the site, its location, potential land uses, easements and the approved general characteristic of the development of the site (such as the number of stories, density of the construction, purposes of the building etc.). The developer should use all this information to estimate the costs of the development and if necessary to gather an additional information on the ecology and the environmental condition of the site. Tenders for short-term leases for housing construction were used in the World Bank project in six cities. Usually these tenders provide the lease construction period rights. With the further development of the transition to the market economy tender as a way of the site procurement will become more popular.

For further information on auctions and tenders reference should be made to experiences in Ekaterinburg and the World Bank housing sites².

Auctions of Construction Sites

This will be an increasingly popular way of obtaining development sites. The major advantage of auctions is that the developer receives the full ownership rights for the site. Such rights may be passed to future clients or kept by the developer depending on the intended use of the project. With the ownership rights the developer will be more likely to attract external investment, to match the developer's funds already invested into the project. Ownership rights for the land might be used as collateral for a possible construction loan. Presently, banks are unwilling to accept land as collateral because it is not a highly liquid asset. However as a market economy develops in Russia, land will inevitably become the main form of collateral for housing projects.

Prior to the auction the bid documents will usually provide the same information as tenders. However the developer will receive full title to the site. Payment for auction sites may be much higher than these payments since the developer receives full title. This makes it even more crucial to estimate the cost of the development to ensure that unit prices will be competitive on the local market.

² Brown, Mark. Sale of Development Rights by Tendered Bidding in Ekaterinburg. PADCO. Nov. 94
Butler, Stephen B., Kaganova, Olga, Khakhalin, Andre, Lipestkich, Yuri, Stoloff, David, Sukhorukova, Tatiana, Visokovsky, Alexander. USAID/Urban Institute Russian Housing Sector Reform Project. Land for Housing: Urban Land Privatization Demonstration Project. Final Report. The Urban Institute. January 1996

Additional information on the tender of the land rights can be found in the experiences of the tenders conducted in Yekaterinburg under a USAID program with the participation of PADCO's specialists.

3.4 Analysis of the Site

After procuring the land, actual site design begins. At this stage all necessary information on the physical characteristics of the site should be available including items found on the checklist at the end of the chapter. The project's success will depend on the accurateness of pre-acquisition site analysis and subsequent development costs.

Prior to site acquisition, the developer should determine the existence of easements and other legal restrictions to use of the site. Often this is quite difficult to do in practice as easements are only determined once site design work is completed. Nevertheless, getting as much site information prior to acquisition is crucial to the project's development. Relocating utility lines can be quite costly and make the project infeasible. Similarly, use restrictions or height restrictions could limit the development potential of a particular site to the point where it is no longer financial feasible to develop it. In such an instance, it may be necessary to either find another site or negotiate better terms with the owner.

3.5 Off-site Analysis

Like the two previous types of site analysis, off-site analysis has two main purposes: the first is to ensure that off-site infrastructure has sufficient capacity to serve the project, and the second is to estimate the impacts of off-site infrastructure costs on total project cost. Off-site conditions include assessment of the site's physical characteristics such as:

Environmental data

- The ecological status of adjacent territories and its impact on the project site. For example are there natural conditions on surrounding territories that enhance the project site or conversely detract from it.
- The adjacent land plots and their impacts on the project site. For example, what are these plot used for and what is their development potential and how might changes in use of adjacent plots affect the project site.
- Possible sources of pollution from adjacent properties. Are there factories or other sources of pollution that would negatively affect the project from achieving its full potential.

Answers to these questions are important to ensure sales of competing housing. In some regions, finding any sites free from pollution is difficult. In such cases, comparisons with other sites in the region should be prepared to estimate the relative level of contamination. Then sites with the lowest level contamination should be selected to safeguard future purchasers. Usually potential investors or lenders ask the developer to provide a Certificate from the Ecological Committee of the local administration prior to actually investing in the project.

Transportation

Typically a developer must consider transportation access to the site during the construction period and then subsequent access to it by unit purchasers when the project is commissioned. The following should be considered:

- The main transportation access to the site for delivery of materials, equipment and labor;
- Density of traffic around the site that might affect future access to it by unit purchasers.
- Possible access to the site. Is there any need to construction additional access roads for future site residents?

Utilities

Typically all sites involve hookup to off-site infrastructure. In determining these costs, the following should be taken account of:

- The location of the main utility lines. Typically questions should be asked about how much additional construction is necessary, at what cost, and paid by whom?
- The capacity of the main utility lines. How much improvement is necessary to serve the project, at what cost, paid by whom?
- Possible technical conditions of hooking up the project. Before the design stage this information needs to be obtained.
- What are the prospects for the infrastructure development in the region? What is the possibility for cooperation with the municipality in infrastructure development?

Social infrastructure

Small projects may not encounter requirements for additional social infrastructures (schools, health facilities, relocation, etc.) Larger projects may place significant demands on social infrastructure and thus incur significant social infrastructure costs. The following should be considered:

- What are the usual terms of getting the access to the site in terms of payments for the social infrastructure?
- Is it possible to establish a partnership in the construction of community projects of the social infrastructure (hospitals, schools etc.). Methods for establishing public-private partnerships are described in Attachment 3.

Sources of Site Analysis Information

Usually the developer uses his intuition and experience to select sites that seem good for development and then works with the local administration to have it allocated to him for development. As more sites become available through tender or direct purchase, developers will need to conduct more careful analysis site conditions before obtaining rights to a particular site. The main sources to obtain the information for the site could be:

- Local administration: Local Architectural Committee, and Land Resources Committee to obtain the information on the legal status of the site. These should include such questions as the current owner of the site, the way to obtain the site, size of the site, the

possible land use rights. A master plan could provide the information on the restrictions on the land use and the possible development of the site.

- Design institutes: preliminary information can be obtained from design institutes on the physical characteristics of the site and approved pre-design characteristics of the possible development.
- Utility Companies: initial information on the infrastructure and conditions for hooking up the project can be obtained from utility companies.

For detailed investigation of the geophysical characteristics of the site, special professional institutes should be contracted to conduct the geological research on the site. This research is a mandatory for the design stage, but it also could be done earlier to secure the developer's investment in the site. Other information could be obtained through different local administration committees and if necessary special companies could be hired for more extensive research.

However it is more likely that the developer would spend some money on the preliminary site analysis before investing money into the site procurement. Site characteristics could be a significant cost of the development. Without proper investigation it is possible that the costs of the development might exceed the market prices for the housing and then have very limited market potential.

As a result of the site analysis the developer should have all the costs associated with the site and utilities estimated. These costs will be one of the major parts of the development costs in the cash flow to be prepared for a loan application. The accuracy of the costs is very important as well as the legal analysis of the site, because of the great influence these could make on the cost of the development and the success of the project.

The following sample analysis checklist was generated to help guide a developer through the types of information that may be needed to judge the feasibility of a potential site.

EXHIBIT B
Sample Site Analysis Checklist³

Mapping

- Boundary survey/area
- Legal description
- Patterns of ownership
- Easements (by type and location)
- Rights-of-way
- Topography
- Aerial photography
- Regional/site location

Topography

- Slopes (mapped by percentage categories)
- Elevations (high and low points)
- Ridges
- Drainageways
- Special features (e.g., rock outcroppings)
- Views (on- and off-site)

Soils

- Types and characteristics
- Depth of topsoil
- Subsoil conditions
- Potential "borrow" sites for construction materials
- Depth to bedrock/groundwater

Drainage

- Surface drainage features
- Groundwater table
- Floodplain boundaries
- Wetlands/marshes
- Location of wells
- Depth to groundwater
- Sources of on- and off-site pollution
- Tide data

Vegetation

- Species present on site
- Woodlands/fencerows/vegetation masses
- Location/size of specimen trees
- Special features/habitats

Land Use

- Existing on-site uses (structures and activities)
- Historical site uses (potential for contamination)
- Surrounding uses (note any objectionable uses or activities)
- Adjacent plots
- Open space/vacant land
- Qualitative assessment of neighborhood
- Growth/development patterns in area

Regulations

- Governmental authorities (city, district, oblast)
- Master/general plan policies
- Existing zoning (for site and adjacent parcels)
- Subdivision ordinance
- Applicable development/impact fees
- Special assessments
- Other applicable municipal, regional, and state regulations affecting the site

Transportation/Circulation

- Existing traffic patterns
- Access points/entries
- Proximity to regional transportation system
- Planned/proposed transportation system improvements
- Trails/paths (existing and planned)
- Accessibility to transit

Utilities

For each, describe location, design, purveyor, availability, tie-in distance from site, costs borne by utility company, and developer fee structures. Note any potential for moratoriums or other factors that could delay or prohibit development.

- Sanitary sewer
- Water
- Storm water
- Electricity
- Natural gas
- Cable television
- Telephone

Public Services/Conveniences

- Schools
 - Location/proximity to site

- Capacity
- Reputation of school district
- Parks and recreational facilities
- Emergency services
 - Fire
 - Police
 - Ambulance/paramedic
- Public transportation/transit
- Commercial services/shopping
- Employment services

Other Features

- Prevailing wind direction
- Climatic conditions
- Archeological sites
- Wildlife (species and habitats)
- Sources of noise
- Aesthetic quality of site and environs

4 Financial Analysis

Why should a developer prepare a financial analysis? There are really two answers to this question:

- To confirm the developer's "gut feel" and informal calculations that the project is viable from a financial viewpoint.
- To show the precise pattern of cash needs for the developer's project that will identify times of highest risk during the construction period and indicate whether outside financing is needed, and if it is needed, exactly when, and for how long.

4.1 Case Study in Preparation of Financial Analysis

To illustrate techniques for financial analysis, we will construct spreadsheets for a typical elite housing project, Pushkin Gardens, planned by developer Ivan Ivanovich Ivanov.⁴ Pushkin Gardens is an infill project located in the Central District of City "N". It consists of two three-storey buildings of brick construction containing a total of 19 units. There are two types of apartments: nine four-room units of 120 square meters, and ten three-room units of 80 square meters. These unit sizes were chosen as a result of Ivanov's market analysis. During project development he had conversations with his competitors, who are all close acquaintances. Then he conducted a study of his waiting list of interested buyers who were not served by his last project. In addition to the apartments Ivanov's project has 19 internal garages, which Ivanov is confident will be purchased by the unit buyers. All communal services are available on-site.

Ivanov acquired the rights to develop the parcel from the City "N" Administration. He agreed to pay \$7,000 for right to develop the land, plus a series of payments totaling \$37,000 for the construction period lease, and an \$80,000 contribution to the City's off-site infrastructure fund. In addition, Ivanov must pay \$90,000 to relocate the previous tenants by purchasing apartments elsewhere in the city, and to tear down three log frame houses on the site. Finally, he is paying \$10,000 for archeological investigations of an ancient Varangian settlement discovered on the site when he began to dig the foundation.

Design costs for the project, \$6,000, are low because the design is similar to earlier projects Ivanov has built. Marketing costs are also low, consisting primarily of a large initial expenditure to introduce the project shortly after construction begins. The bulk of the project's cost is direct construction, which comes to \$770,000. There is no budget for insurance, although Ivanov may find later that if he is approved for a loan, the lender will require it. Property taxes are nominal, only \$1,000 during the life of the project. Finally, Ivanov allocates \$12,500 of his overhead costs – salaries of supervisory and office staff, and office expense – to the project. As a precautionary calculation, Ivanov assumes that his costs

⁴ This case study is actually a composite of three real projects currently being built in Tver and Nizhny Novgorod.

will increase at the rate of 1% per month, across the board, during the construction period. He derives this rate from his recent experience, plus conversations with his materials' suppliers and principal subcontractors.

Ivanov has already invested \$19,450 of his own money in the project. He would like to borrow the balance of the funds he needs, including interest expense. He thinks that because of his experience and the strength of the project, he can convince a banker to lend to him at a dollar rate of 21% per annum.

Ivanov plans to use his usual sales scheme, requiring a 40% down payment at the time the contract is signed with each buyer, with the balance due upon completion and occupancy. He also expects that the market for this type of housing, which has been strong in City "N", will enable him to continue to increase prices at the rate of 1% per month during the project's life.

4.2 Profit and Loss Statements

The first step in financial analysis of a project is to prepare a **Profit and Loss Statement**. A P&L statement is a static first look at the profitability of a project. Developers often prepare these such P&L statements at the start of a project to decide whether to go further with a project concept. Later as more information about project revenues and costs emerges, the P&L statement should be updated to reflect changes in the overall project finances. Typically investors and bankers also use P&L statements to get a first quick overview of a project and to decide whether to evaluate the project further. Exhibit C illustrates a P&L statement for Ivanov's project.

Exhibit C
Profit & Loss Statement for Pushkin Gardens

Items	Totals (in S'000)
I. Revenues	
Gross Sales Revenues	1,617.44
Less VAT	(269.63)
Gross Sales Revenues after VAT	1,347.81
II. Project Costs	
Land plus off-site infrastructure	224.00
Design	19.00
Direct construction plus on-site infrastructure	770.00
Administrative Overhead	77.00
Insurance	7.70
Marketing	15.40
Taxes (property, etc.)	30.38
Total Project Costs	1,143.48
Provision for inflation	51.10
Total Project Costs Plus Inflation	1,194.58
III. Net Cash Flow before Financing	153.23
Less Financing Costs	(49.46)
IV. Net Profits after Financing	103.77

Based on this quick analysis, Ivanov sees that Pushkin Gardens is potentially profitable and decides to look at the project in more detail.

4.3 Cash Flow Analysis

To determine if the Pushkin Gardens project is sound from a financial perspective, we must look at the project's **cash flow**. **Cash flow** is the timing of costs and revenues over the life of the project, from the first expenses incurred in planning through the closing of the last sale.

To track cash flow, we create a series of spreadsheets which combine the developer's estimates and key assumptions about the project he wants to finance. The first step is to create spreadsheets which display revenues and costs as they are projected to occur, period by period (Exhibits D & E). Generally, it is sufficient to chart cash flow month by month, although in times of very high inflation it may be necessary to chart cash flow week by week. Then we combine the results of the first two spreadsheets into a third spreadsheet for analysis (Exhibit F). The spreadsheets shown in the Handbook are intended to illustrate how such spreadsheets should be developed. The formats presented in the spreadsheets should be modified as is needed to suit individual projects.

4.4 Exhibit D: REVENUE

In most development projects, the sole source of project revenue will be income from sales of units. When preparing a loan application, it is important to show clearly the sales revenue, and when it will be received. This is especially true in today's market in Russia, where payments in advance of property rights transfer and occupancy account for a large part of project revenue.

In our spreadsheet model, we devote the first of the three pages to showing the sources of revenue (see Exhibit D, **Revenue**). There are many possible ways to display this information. We prefer to show sales income two ways – by the square meter for housing units and by garage because most Russian developers think in terms of square meter sales. In doing so, we have included the costs of common elements into the square meter costs as is commonly done in Russia.

Exhibit D

Project Name: Psuhkin Gardens

Revenues (in \$,000's)

No.	Item	Project months															Total	
		Previous Revenue	1	2	3	4	5	6	7	8	9	10	11	12	13	14		15
(1)	Sq. meters sold. Unit type 1					46.4	46.4	58	81.2	104.4	127.6	127.6	116	116	116	81.2	69.6	1090.40
(2)	Sq. meters sold. Unit type 2					33.6	33.6	42	58.8	75.6	92.4	92.4	84	84	84	58.8	50.4	789.60
(3)	Total area sold (sq.m.)					80.00	80.00	100.00	140.00	180.00	220.00	220.00	200.00	200.00	200.00	140.00	120.00	1880.00
(4)	Price per square meter		0.700	0.707	0.714	0.721	0.728	0.736	0.743	0.750	0.758	0.766	0.773	0.781	0.789	0.797	0.805	
(5)	Sales Revenue					57.70	58.27	73.57	104.03	135.09	166.76	168.43	154.65	156.19	157.76	111.53	96.56	1440.53
(6)	Garages					3		2	1	1	1	2	2	4	1	1	1	19
(7)	Price per unit		8.10	8.18	8.26	8.35	8.43	8.51	8.60	8.68	8.77	8.86	8.95	9.04	9.13	9.22	9.31	
(8)	Advance payment (40%)					10.01	0.00	6.81	3.44	3.47	3.51	7.09	7.16	14.46	3.65	3.69	3.72	67.01
(9)	Schedule of balance payment						1.37	1.37	2.50	3.15	3.89	4.77	6.89	9.58	16.81	19.55	40.03	109.89
(10)	Total, sales of garage					10.01	1.37	8.18	5.94	6.62	7.40	11.85	14.05	24.04	20.46	23.23	43.76	176.90
(11)	Total revenues from all sales		0.00	0.00	0.00	67.71	59.64	81.75	109.97	141.71	174.16	180.28	168.70	180.23	178.21	134.77	140.31	1617.44
(12)	VAT		0.00	0.00	0.00	11.29	9.94	13.63	18.33	23.62	29.03	30.05	28.12	30.04	29.71	22.47	23.39	269.63
(13)	Revenue after tax		0.00	0.00	0.00	56.42	49.70	68.12	91.64	118.09	145.13	150.23	140.58	150.19	148.51	112.30	116.92	1347.81

Assumptions:

1. Initial prices: Unit Typ 9 units@120sq.m.@\$650=\$88,000=\$892,000=\$792,000
Unit Type 2 10 units@80 sq.m.@\$650=\$64,000=\$640,000
2. Initial garage price \$8,100 with a 40% advance payment, the balance is paid over time.
3. Prices increase at 1%.

The **Revenue exhibit** reflects the important assumptions the developer has made about sales activity: the different types of units he will build; the size of each type of unit; when each unit in the project will be sold; sales of products other than living units, such as garages or offices; and the timing of payments made to the developer by the unit buyers. This last item is especially important. The developer will have to convince the bank that revenue from pre-sales and final payments from buyers will be realized at the predicted times to repay the loan. In Ivanov's case, he has a strong market analysis which shows that he can expect a steady demand for his units through construction.

The **Revenue exhibit** also shows the developer's assumptions about selling prices. Most developers show a steady increase in the prices to be paid by buyers. This predicted rate of increase in selling prices must be plausible to the banker. It must reflect current price levels in the market area, and it must be consistent with trends and influences that are likely to affect the market during the project's life.

In our example we show sales of each distinct products which Ivanov is offering for sale at Pushkin Gardens: apartments of 120 and 80 square meter units, and garages. If commercial or office space were included in the project, they also would be shown separately. Within the category of apartments, we show the 120 and 80 meter apartments as separate line items. If there were more types, these would also be shown separately, because each type of unit, distinguished by size, floor, amenities, etc., constitutes a distinct product.

The exhibit shows the pattern of sales of units, in terms of square meters. Developers use different payment schemes. These should be taken into consideration in the spreadsheet preparation. It is also useful to show the number of units sold in the spreadsheet, but because it depends on the concrete sale schemes, this information is missed in the example. The expected selling price per square meter increases at a rate of 1% per month according to Ivanov's projections. The sale of garages and the revenue from it are shown separately. Each product of the development should be shown separately. The sum of revenues from housing units and garages decreased by VAT, so the last line is "Net Revenues after Taxes". These figures are copied to Exhibit F, **Cash Flow Analysis**, where they appear on Line 1.

All the figures in the exhibits are displayed as dollars, because we have found that Russian developers typically calculate prices and costs in dollars. However it may be also easily done in rubles. Payment from buyers, however, typically occurs in rubles. The ruble price paid by the buyer would be determined each month by multiplying the dollar price per meter times the current exchange rate. At the time of the preparation of the spreadsheets predictions about the exchange rate should be prepared. Many developers consider that the increase of the exchange rate will completely recover the inflation, this does not look realistic.

4.5 Exhibit E: COSTS

Costs, like revenue, are displayed in a separate page of the exhibit model. It is important to show cost data in some detail for two reasons. First, it demonstrates to the banker that the developer has thought carefully about all the possible expenses which comprise the project's total cost, and that nothing important has been omitted. Second, displaying detailed cost information in the form of an exhibit enables the developer to experiment with different assumptions about the level and timing of costs. Later, in the section entitled "Sensitivity Analysis", we will explain why this is important.

Exhibit E

Project Name: Psubkin Gardens

Project Costs (in \$,000's)

Sr / No	Type of cost	Project months												Total	
		Previous costs	1	2	3	4	5	6	7	8	9	10	11		12
	Acquisition costs:														
(1)	Land/development rights	3.00				2.00				1.00			1.00		7.00
(2)	Off-site infrastructure	30.00				5.00	10.00	10.00	10.00	5.00	5.00	5.00			80.00
(3)	Payment to city	28.00				3.00				3.00			3.00		37.00
(4)	Removal & relocation	75.00			15.00										90.00
(5)	Special works (archeological, etc.)	10.00													10.00
(6)	Other														0.00
	Total	146.00	0.00	0.00	15.00	10.00	10.00	10.00	10.00	9.00	5.00	5.00	4.00	0.00	224.00
															15.00
(7)	Design		5.00	5.00	5.00										15.00
(8)	Direct construction costs	65.00	50.00	50.00	55.00	70.00	55.00	65.00	65.00	70.00	80.00	75.00	70.00		770.00
(9)	Overhead (10% of direct cost)	6.50	5.00	5.00	5.50	7.00	5.50	6.50	6.50	7.00	8.00	7.50	7.00	0.00	77.00
(10)	Marketing (2-5% of direct cost)	1.30	1.00	1.00	1.10	1.40	1.10	1.30	1.30	1.40	1.60	1.50	1.40	0.00	15.40
(11)	Insurance	0.65	0.50	0.50	0.55	0.70	0.55	0.65	0.65	0.70	0.80	0.75	0.70	0.00	7.70
(12)	Taxes (property, etc.)				3.30			6.15			9.38			11.55	30.38
(13)	Total project cost	219.45	61.50	61.50	85.45	89.10	72.15	89.60	83.45	88.10	104.78	89.75	83.10	11.55	1139.48
(14)	Monthly rate of cost increase		1.00	1.01	1.02	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.10	1.12	
(15)	Total project cost including inflation	219.45	61.50	62.12	87.17	91.80	75.08	94.17	88.58	94.46	113.46	98.16	91.79	12.89	1190.62

Assumptions:

1. Monthly rate of cost increase

1%

The **Costs exhibit** shows all the major categories of costs which occur during the project's life, displayed as line items and totaled at the bottom. The titles of these line items are self-explanatory. These categories, and the resulting line items, will vary somewhat from project to project.

Of particular importance are all the costs associated with acquiring the land and development rights from the city. For Pushkin Gardens, we show the details of Ivanov's deal with the City at first section labeled "Acquisition Costs". In cases where these costs entail actual cash payments, they must be shown on the **Costs exhibit**. All of the acquisition costs for Pushkin Gardens are of this type. If, however, Ivanov had agreed to a split of the revenues or profits of the project with the City administration, then it we would show them on Exhibit F, **Cash Flow Analysis**.

The **Costs exhibit** has a line item "Monthly rate of cost increase" which accounts for the developer's expectations of cost inflation (line 14). In this model we show a single rate applied to the project's total cost each month. Sometimes it may be important to show different rates applied to different line items. This would be true if the developer knew that the prices of key construction inputs, such as concrete or wages, were likely to rise or fall dramatically during the construction period. Different indices of inflation can be used: examples are the Consumer Price Index found in Current Statistical Survey of Goskomstat of Russia, the index produced by Co-Invest, and the official Russian Federation index.

We strongly advise against use of the 1984 index of construction industry prices which is still widely used by many builders and developers. It is no longer an accurate reflection of the relationship among different construction inputs, and lenders and investors will distrust any calculations based upon it.

4.6 Exhibit F: CASH FLOW ANALYSIS

The third exhibit, **Cash Flow Analysis**, includes the final figures from the **Revenue and Costs exhibits**. For each period we combine the revenues and the costs which result directly from the project's operations. This yields a net figure, which is called "cash flow before financing". If negative for the month, this is the amount which the developer needs to borrow. If positive, this is the amount he can apply to repayment of the loan. If the loan has been fully repaid, this amount is applied to equity. Generally, **cash flow before financing** will be negative in the early months of the project, and will turn positive once proceeds from the sale of units begin to be received.

In our model we assume that the developer will also borrow funds each month to cover **financing expense** -- interest and any other charges associated with borrowing.

Having determined **cash flow before financing** for each period (line 3), the developer has a clear picture of the project's cash requirements. Assuming the developer wants to borrow all needed funds, the sum of the negative cash flows during the beginning months of the project,

plus interest, indicates the borrowing needs (line 6 which is the sum of line 3 expressed as a positive value and line 4 interest expense). Borrowing and repayment activity month by month, and the size of the outstanding loan at the beginning and the end of each month is shown in the spreadsheet.

Exhibit F

Project Name: Pushkin Gardens
CASH FLOW ANALYSIS

Unit: \$ 000's

#	Item	Previous	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	Total
(1)	Sales revenue		0.00	0.00	0.00	56.42	49.70	68.12	91.64	118.09	145.13	150.23	140.58	150.19	148.51	112.30	116.92	1347.81
(2)	Costs	219.45	61.50	62.12	87.17	91.80	75.08	94.17	88.58	94.46	113.46	98.16	91.79	12.89				1190.62
(3)	Cash flow before financing	(219.45)	(61.50)	(62.12)	(87.17)	(35.38)	(25.38)	(26.05)	3.05	23.63	31.67	52.07	48.78	137.30	148.51	112.30	116.92	157.19
(4)	Financing expense (interest)	-	3.50	1.14	2.24	3.81	4.49	5.02	5.56	5.61	5.29	4.83	4.00	3.22	0.87	-	-	49.58
(5)	Developer's Own Funds	219.45																219.45
(6)	Loan		65.00	63.25	89.41	39.19	29.88	31.07	2.51	-	-	-	-	-	-	-	-	320.30
(7)	Repayment		-	-	-	-	-	-	-	(18.03)	(26.38)	(47.24)	(44.78)	(134.08)	(49.79)	-	-	-320.30
(8)	Cumulative debt		65.00	128.25	217.66	256.85	286.73	317.79	320.30	320.30	302.28	275.90	228.66	183.88	49.79	-	-	
(9)	Outstanding debt		65.00	128.25	217.66	256.85	286.73	317.79	320.30	302.28	275.90	228.66	183.88	49.79	-	-	-	
(10)	Cash flow after financing	(219.45)	-	-	-	-	-	-	-	-	-	-	-	-	97.84	112.30	116.92	107.61
(11)	Loan to value ratio		23%	37%	50%	54%	57%	59%	59%	59%	58%	56%	51%	46%	18%	0%	0%	

(12)	Profit	107.6	
(13)	Revenues	1347.8	
(14)	Cost	1190.6	
(15)	Profit as % of sales	8.0%	
(16)	Profit as % of cost	9.0%	
		annual	monthly
(17)	discount rate	21%	1.60%
(18)	interest rate	21%	1.75%
(19)	NPV	\$42.18	
(20)	Total cost of the project	1,347.81	100.00%
(21)	Less developer's investment	219.45	16.28%
(22)	Balance to be finance	1,128.36	83.72%
(23)	Return on Investment		49.04%

Loan repayment assumptions:

If the cash flow is positive the payments will be done in next order:

1. Repayment of the loan.
2. Interest rate payment.
3. Equity.

In constructing the **Cash Flow Analysis (Exhibit F)**, we have assumed that outstanding debt (line 9) will be repaid from positive cash flows according to the following priority: first positive cash flows will be used to repay outstanding capital or loan amounts, next outstanding interest will be paid and finally positive cash flows will contribute to the developer's equity in the project. Obviously, this payment priority should be negotiated with the bank before loan signing.

Cash flow after financing (line 10) shows the cash remaining after loan repayment. The total of this row is the project's **net cash flow** and represents the project's profit after recovery of the developer's own funds. This line could not be negative because all sources of finances are considered.

4.7 Net Present Value (NPV) Analysis

When evaluating an investment, it is important to distinguish between "net cash flow" and the project's true profits. Net cash flow can be misleading. Many developers think that if this figure is positive, the developer has made a profit. This is not necessarily true, and in any case net cash flow does not indicate the real profit of the developer since it does not take account of the time value of money. Simply put the value of a ruble invested in a development now will not be the value of a ruble received in payment for that development at the end of the project. The difference between the two values is the opportunity cost of the investment, or the value that the investor might have received if the investment were made in a more profitable investment.

One of the most commonly used procedures for determining the value of future cash flows is the **Net Present Value (NPV)**. Expressed most simply, the net present value of an investment is today's value of a series of future payments (negative values) and income (positive values). The NPV is determined by discounting the inflows of investment back to the present time. If the NPV is greater than zero, the investment is deemed to be a good one since it achieves the investor's financial objectives. The **discount rate** used in the NPV calculations to discount the inflows is the rate that an investor could receive on a similar investment, for example, if the investment were placed in a short-term dollar deposit in a bank account. The following equation expresses these relationships:

$$NPV = (\sum_{i=1,n} CF_i (1+d)^{-i}) + CF_0$$

Where:

- CF_0 = the initial cash flow (or investment) made at the beginning of the first period or period₀
- CF_i = the cash flow for period i
- d = the discount rate
- $1,n$ = periods of the cash flow starting at the end of period i , through period _{n}

In our example, the discount rate (line 17) is set at the interest rate at which we expect to receive construction period financing because the bank is the investor who might have competing investments. Based on discussions held with banks in mid 1996, interest rates on dollar-based construction period loans might range from 16% to 30%. We selected 21% (line 18) as the rate that Ivanov is likely to receive.⁵ If the spreadsheet were being constructed for other investors (or for the developer) a different discount rate could be used to represent the expected rate that might be received on competing investments (for example, the stock market for foreign securities).

In Pushkin Gardens, the initial cash flow (CF_0) found on line 10 is the Ivanov's initial investment made in land acquisition costs, initial construction costs, design work and the like (see line 15 of **Project Costs - Exhibit E**). Cash flows are also found in line 10, "Cash Flow after Financing." In this example, because of the high rate of inflation being experience in Russia, the annual discount rate has been converted to a monthly rate using the following formula:

$$d_m = \sqrt[12]{1+d} - 1$$

Where:

d_m = monthly discount rate
 d = annual discount rate

Since the net present value of Pushkin Gardens is positive (see line 19), Ivanov concludes that the investment should be profitable and proceeds to present his loan application to a local bank for financing. If the NPV were negative, Ivanov should review his assumptions about the rate of sales, marketable sales prices and possibly his costs to develop the project. Any of these might be adjusted to improve the cash flow and result in a positive NPV. If these parameters cannot be changed, a negative NPV suggests that the project is not a financially attractive venture and Ivanov would be advised to invest his funds elsewhere in a less risky investment.

NPV analysis shows how the timing of cash flows affects the project's profitability. While receiving sales income earlier than later is always better, sometimes, the timing of sales determines whether the project should be built or not.

4.8 Using Net Present Value to Compare Projects

NPV analysis can be used for a second purpose: to compare the relative profitability of different projects. Here the discount rate is set at a level which covers not only inflation, but also the minimum profit which the developer is willing to receive for building a project. This

⁵ In selecting this rate, we are implicitly assuming that the bank's interest rate includes provisions for inflation.

extra increment is sometimes called the hurdle rate, because projects must clear this hurdle of minimum profitability if they are to be seriously considered. The project with the higher NPV of course is more profitable for the developer, if the other terms are similar. In practice the NPV characteristic of the project is not enough to make a choice between projects.

As an example, let's compare our project Pushkin Gardens with a second project, Lermontov Towers, which has an identical investment requirement but different cash flow streams (see **exhibit G**). Developer Ivan Ivanov is considering these two possible projects. Each project requires \$219,450 of the developer's capital to be invested at the outset. Both projects have positive net cash flows. Lermontov Towers has a higher net cash flow, but takes longer to complete than Pushkin Gardens.

Presently Ivanov could earn 21% on short-term dollar deposits if placed in a bank. This represents an opportunity cost of capital and should be used as a discount rate to calculate the NPV. Using discounted cash flow analysis, we see that the second project has a much smaller NPV. In this case Ivanov would choose to build only Pushkin Gardens.

The choice of the proper discount rate is important. Without a set objective dictated by the developer's own business plan, a good proxy might be the real rate of interest on loans made by banks and others within the developer's market area, since this would reflect local competitive conditions for investment funds.

Exhibit G

Project Name: Lermontov Towers
 CASH FLOW ANALYSIS (in \$,000's)

No.	Item	Project months														
		Previous	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	Sales revenue		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	200.00	200.00	200.00
(2)	Costs	219.45	275.00	300.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	100.00		
(3)	Cash flow before financing	(219.45)	(275.00)	(300.00)	(200.00)	(200.00)	(200.00)	(200.00)	(200.00)	(200.00)	(200.00)	(200.00)	(100.00)	100.00	200.00	200.00
(4)	Financing expense	-	-	4.81	10.15	13.82	17.57	21.37	25.25	29.19	33.20	37.28	41.43	43.91	42.93	40.18
(5)	Developer's Own Funds	219.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(6)	Loan	-	275.00	304.81	210.15	213.82	217.57	221.37	225.25	229.19	233.20	237.28	141.43	-	-	-
(7)	Repayment	-	-	-	-	-	-	-	-	-	-	-	-	(56.09)	(157.07)	(159.82)
(8)	Cumulative debt	-	275.00	579.81	789.96	1,003.78	1,221.35	1,442.72	1,667.97	1,897.16	2,130.36	2,367.64	2,509.08	2,509.08	2,452.98	#####
(9)	Sales Revenue	-	275.00	579.81	789.96	1,003.78	1,221.35	1,442.72	1,667.97	1,897.16	2,130.36	2,367.64	2,509.08	2,452.98	2,295.91	#####
(10)	Cash flow after financing	(219.45)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(11)	Loan to value ratio		56%	73%	78%	82%	85%	87%	88%	90%	91%	92%	92%	92%	92%	91%

(12)	Profit		125.08													
(13)	Sales		3,050.00													
(14)	Cost		2,694.45													
(15)	Profit as % of sales		4.1%													
(16)	Profit as % of cost		4.64%													
		annual	monthly													
(17)	Discount rate	21%	1.60%													
(18)	Interest rate	21%	1.75%													
(19)	NPV	59.99														
(20)	Total cost of project	2,694.45	100%													
(21)	Less developer's investment	219.45	8.14%													
(22)	Balance to be financed	2,475.00	91.86%													
(23)	Return on Investment		57.00%													

(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	Total
300.00	300.00	300.00	300.00	200.00	200.00	200.00	200.00	200.00	150.00	3050.00
										2700.45
300.00	300.00	300.00	300.00	200.00	200.00	200.00	200.00	200.00	150.00	349.55
37.38	32.79	28.11	23.35	18.51	15.33	12.10	8.81	5.47	-	542.95
-	-	-	-	-	-	-	-	-	-	225.45
-	-	-	-	-	-	-	-	-	-	2509.08
(262.62)	(267.21)	(271.89)	(276.65)	(181.49)	(184.67)	(187.90)	(191.19)	-	-	-2196.60
2,136.09	1,873.47	1,606.26	1,334.37	1,057.72	876.23	691.56	503.67			
1,873.47	1,606.26	1,334.37	1,057.72	876.23	691.56	503.67	312.48			
-	-	-	-	-	-	-	-	194.53	150.00	119.08
90%	89%	88%	86%	82%	80%	75%	69%	0%	0%	

4.9 Return on Investment

Return on Investment (ROI) is the ratio of profit to the developer's total capital invested in the project, expressed as a percentage. There is no industry standard for ROI; the standard is set by the market. An acceptable ROI depends on many factors, including the competition, the ratio of the developer's capital to total project investment, and the relative degree of perceived risk of a given project. If possible, developers should determine the return received by their competitors on similar projects and use this as a basis for comparison.

In our two projects, the ROI (line 23 in Exhibits F and G) is greater in the second project, Lermontov Towers, since revenues and costs are larger than in the Pushkin Gardens project resulting in higher profits. However, since the profits from Lermontov Towers are received much later than Pushkin Gardens, Ivanov might still decide that Pushkin Gardens represents a better investment. Normally a project that produces profits earlier is always preferable since risks increase with project duration.

4.10 Return on Sales

Sometimes ROI is not a useful tool for analyzing a project's desirability. If a developer borrows all the funds needed to build a project, or invests only a small amount of his funds, ROI will be extremely high or infinite, and will not be an accurate measure of the project's relative desirability.

In this case, **return on sales** should be considered. Return on sales is the ratio between net cash flow and sales revenues. Exhibit G, lines 13-15 show how to calculate return on sales for Pushkin Gardens. Line 15 shows the return on sales, since it is positive, it is another good indicator that this is a good project for Ivanov to build. Again in comparing the two projects, Pushkin Gardens compares favorably with Lermontov Towers as the former has a higher return on both sales and costs.

Exhibit H
Return on Sales (from Pushkin Garden's Project Exhibit F)

(12)	Profit	103.80
(13)	Revenues	1,347.80
(14)	Costs	1,160.60
(15)	Profit as % of sales	7.7%
(16)	Profit as % of costs	8.9%

4.11 Loan to Value Analysis

Ratio analysis is a technique used by lenders to determine the maximum amount they are willing to loan to a developer for a particular project. It is calculated by comparing the proposed loan amount to the total capitalization of the project, and is expressed as a percentage. It's important to look at the **loan to value (LTV) ratio** from period to period to ensure that it stays within the limit set by the lender. (See Exhibit F, line 11). Bankers' ratio limits vary according to many factors. In today's financial environment, however, it is unlikely that a Russian bank will consider a loan which exceeds 70% of total project capitalization. In Pushkin Gardens, the LTV ratio never exceeds 59% (months 7 and 8).

Ratio analysis is not especially useful to developers, except to indicate whether a loan request is likely to be approved by the lender. More important is the developer's ability to find additional equity to put into a project if projections are too optimistic, and cash flow from operations is inadequate to maintain the lender's required ratio.

4.12 Sensitivity Analysis

Both revenue and expenditure figures of the cash flow model are projections. While they are based on the developer's best estimates, projects do not always proceed as planned. Costs of materials may be higher than anticipated due to inflation or short supply. Buyers may prefer competitors' products, the rate of sales may be slower than expected, or selling prices may be lower than predicted because of a declining local economy.

To account for deviations from the plan, performing **sensitivity analysis** is important to assess the risks. Sensitivity analysis is an exercise in saying: "What if . . . ?" What if costs increase during the construction period? What if sales are half the anticipated rate?

Ivanov decides to assess the risk of his Pushkin Gardens project through a sensitivity analysis that will consider the main risks that he perceives to the project:

- The risks that selling prices do not keep pace with inflation as he assumed while, construction costs continue to increase;
- The risk that construction costs increase at a rate that is faster than selling prices;
- The risk that he is not able to finance the project through advance sales as rapidly as he originally thought; and
- The risk that he will not get favorable terms from his lender and have to pay higher interest rates than expected.⁶

Throughout these tests, if the NPV remains positive, Ivanov knows that his project's financial feasibility is very strong. If a negative NPV appears under sensitivity testing, he knows that

⁶ Some developers also test various tax rates, but this normally needs to be done at the corporate level. Therefore, it is not included here.

the project may still be viable, but that there are potentially greater risks than originally foreseen. Strongly negative NPV's, however are a danger signal and may show that Ivanov must either contribute more of his capital to the project or significantly redesign it to reduce costs or improve sales performance. Exhibit I illustrates the tests Ivanov performed.

Exhibit I
Sensitivity Tests of Pushkin Gardens

	Test	Base Scenario	Test 1: Prices do not Increase	Test 2: Costs increase to 2% per Month	Test 3: Sales start on Month 10 instead of Month 4	Test 4: Interest Rates are 5% higher (26%)
I.	Project Revenues	1,347.80	1,244.00	1,347.80	1,380.30	1,347.80
II.	Project Costs	1,190.60	1,190.60	1,245.00	1,190.60	1,190.60
III.	Financing Costs	49.60	53.80	54.30	103.10	61.90
IV.	Net Profits	107.60	(0.40)	48.50	86.60	95.30
V.	Net Present Value	42.18	(45.25)	(5.90)	21.88	32.14
VI.	Loan Amount	320.30	331.81	339.09	778.21	325.82

Note: All scenarios use the same discount rate of 21%.

From the assessment, Ivanov sees that his greatest risks are likely to come from the inability of increase sales prices and unexpected cost increases. These will require careful monitoring of costs. There are also risks from slow sales performance, but these could be mitigated through aggressive sales strategies.

4.13 Deciding to Borrow

After preparing a financial analysis, a developer has to decide whether he wants to borrow funds from a lender or build the project using funds from other sources: his equity, equity from outside investors, advance deposits from unit buyers and the like. The decision cannot be based solely on the project itself since the developer's state of corporate finances may be an equally important factor in deciding whether to finance the project internally through own funds or seek outside financing.

The cash flow analysis and sensitivity analysis can help decide. First a developer must decide whether the project offers a sufficient return on his capital. If so, it may be advisable to finance most of the project through the developer's equity. Most developers, however, do not

have sufficient capital to finance projects themselves entirely. Therefore the next step in the decision process is to decide whether the project should be financed through loans from commercial banks or through a combination of investors and advance sales from future buyers. The developer's market analysis should help at this stage. Market analysis should show whether enough buyers are willing to pre-finance the project through advance deposits. From the analysis, it should be possible to decide what premium or discount on the unit price is necessarily to attract advance deposits from buyers.

At this stage the **Cash Flow Analysis** shown in Exhibits F through G should help in making the decision. By varying assumptions about the rate of advance sales and prices, the developer can probably decide if the market is strong enough to permit financing the project entirely through his equity and advance sales.

If the results of this process are not satisfactory, the next step is to decide the impact on the project of financing the project through either commercial bank loans or outside investor's equity. Typically investors will want a share of the project's profits and will generally not want a financial involvement in the project that greatly exceeds that of the developer. Again, through varying assumptions about the developer's investment, the feasibility of seeking outside investors can be tested to see if the project is sufficiently attractive to outside investors.

Construction period loans are an alternative to seeking outside investors. The main difference is, of course, that the lender will expect repayment of the loan amount and interest before the developer receiving any profit from the project. After constructing revenue and cost spreadsheets, the next step is to test the financial impact on the project of different lending terms as was done in the sensitivity analysis illustrated in the previous section.

Questions of risk and who bears it are fundamental to the decision to seek outside financing from either investors or commercial banks. If the developer uses his own funds, he bears all the risk that the project might fail. If he takes out a loan, the lender shares in the risk. While there is a cost to having the lender share the risk, doing so may allow the developer to invest his own funds in several different projects, thereby diversifying his risks. If one project fails, profits from the others may compensate for the single loss.

There may be subtle advantages to using a lender's funds. For instance, the lender's commitment to the developer and the project may have marketing value. Potential buyers may be impressed by the lender's participation in the project and feel more confidence in the developer when deciding to buy a unit. They may feel that their down payments are safer because the lender has already put funds into the project.

The decision to borrow is not exclusively a financial decision. However, financial analysis can assist a developer to make this choice by showing the difference that borrowing makes in the expected financial results.

4.14 Instructions/Explanations of Actual Conditions in Russian Economy, Keyed by Line to Model Cash Flow

This section of the Handbook is designed to provide step-by-step guide on how to complete the cash flow analysis and loan application.

4.14.1 Revenues

In the Revenues table only the actual incoming cash-flow should be shown. Developer must predict, based on market research how much revenue will be received from purchasers and when, month by month. This means that in the preparation of the table following factors should be considered:

- price of the complete unit or square meters;
- scheme of payment. How many units or square meters will be purchased each month.
- the rate at which prices can be increased.

Because of the high inflation in Russian historically the prices for the units are denominated in US dollars in the more developed cities. There are three different types of the pricing structures that are common in Russia.

Open Prices

Under this pricing scheme, a unit price is agreed with a purchaser at contract signing. Later if prices increase the entire price increase is passed to the buyer. To illustrate a buyer and seller agree upon an initial price of one million rubles and the buyer pays an advance the payment of one hundred thousand rubles at the start of the construction. In this case the whole risk of price increase is borne by the purchaser. This scheme protects the developer, but is very risky for the purchaser. The purchaser does not know the price of the unit until he gets the unit and makes the final payment. Because of the greater risk for the client this scheme is not widely used. Developers were forced by market conditions to offer better schemes. Open prices are very rarely used and mostly by the older type of the construction companies rural cities. These developers now are losing their customers, because there are better types of pricing schemes on the market.

Conditionally Fixed Price

In this case the price per square meter is determined in the beginning and the purchaser pays in accordance with a payment schedule. Every month the price per square meter is altered according to inflation. But this new price is only applicable to the current payment and does not affect the amount of square meters purchased. This scheme is less risky for the purchaser though he does not know the total price to be paid till the last payment. The risk of the price increase is actually borne by the purchaser but it is determined in a more fair way. This type of pricing is the most popular now. Some slight modifications of this price system exist in different cases, for example, the price may be denominated in dollars or in rubles.

Fixed Price

Here, unit price is agreed with the purchaser at the moment of signing the purchase contract. This price can not be changed during construction. All risks of increasing the construction costs are borne by the developer. The developer usually tries to get as much money as he can when signing the contract, upfront, to ensure against the possibility of cost increases. This type of pricing is the best for the purchaser. Only very sophisticated developers use this scheme because it involves a great deal of forecasting of inflation in construction costs and of the housing market. The fixed type price is used very rarely and mostly for elite housing by highly experienced developers.

Depending on the pricing and financial policy of developer and also the market analysis results, the number of square meters to be sold and actual price should be forecasted each month. As a result the project revenues (line 13) will be forecasted.

In determining the current price of housing it is very important to consider the stage of construction completion. When the client pays money in advance, the price per square meter he pays should be considerably less than the final price per square meter. There are several ways to determine the discount to be used here. Theoretically one method for calculating the discount is to make it equal to the interest that a purchaser might earn if the money were deposited in a bank account. Most developers find this too expensive and attempt to negotiate a lower discount rate or find buyers willing to make advance payments without a discount. In all cases the discount should be justified by the market analysis or pre-agreements with the buyer.

Both prices for square meter and number of units should be stated in the loan application in order for the banker to estimate the validity of the overall price represented by the square meter price and the market price of the entire project to be constructed.

If the development includes different uses such as office space or a shopping area, the incoming cash flow for them should be shown separately.

4.14.2 Costs

Land development rights. All costs associated with obtaining the development rights for the site should be given here, including but not limited to lease of the site, the cost of buying the rights to lease the site, land price paid, etc.

Off-site infrastructure. All costs associated with the off-site infrastructure such as costs of hooking up and one-time payments for services provided should be reflected.

Payments to the city. All payments due to the city should be reflected. It may differ from city to city and be determined by the local administration decrees. This item should also reflect the social infrastructure contribution to be paid. Some of these costs may be paid by a number of units from other projects to be given to the local administration free of charge. Then the cost of these units should be calculated and given here. If free units are to be provided to the local

administrations from the current project, this contribution should be reflected in the Revenues through a reduction in the number of units sold at market prices.

Removal & relocation. In some development the removal of the buildings from the site and relocation some of the users could be applicable. The cost of these works should be estimated here.

Special works. The costs of any special works to be done on the site as archeological, geological etc. should be presented here.

Design. The cost of the design work should be input here. For simplicity this should include all types of design works, soil tests, etc.

Direct construction cost. The estimate of the direct construction cost should be given here, based on actual contracts with building contractors and material suppliers. If the developer is also a general contractor, cost estimates should be provided based on actual expenditures in the current market. Reference to historical costs corrected annually by some inflation coefficient are not a reliable determinant of construction cost.

Overhead. "Overhead" should be divided into two parts: on-site indirect construction costs and allocation of home office costs. Both should be estimated by determining what resources, staff and materials are required to operate the development. After estimating actual costs of overhead, a calculation may be made of costs as a percentage of sales revenue. This percentage calculation is for purposes of comparison with industry norms and other projects. One problem in Russian accounting is that actual overhead cost is not properly allocated to projects. So the relative part of the company overhead should be shown here on the basis of the project contribution to the company activity.

Marketing. The cost of market research and the actual cost of the marketing activities including advertising, promotion etc. should be given here.

Insurance. The cost of the insurance of the developer's risks should be shown here if applicable.

Taxes. All taxes that are charged on a different basis than profit should be shown here.

Monthly rate of cost increase. This rate is a forecast, and there are many ways of determining it. One is to show the expected rate of inflation by assuming that it will be the same as the rate of construction cost inflation. This is risky, and not an accurate rate, particularly considering the number of different predictions of the inflation by different agencies.

Total project cost including inflation. This line is just a multiplication of monthly rate of cost increase and the total project cost.

4.14.3 Cash Flow Analysis

This is the most important part of the spreadsheets. It is aimed to calculate the actual amount of funds needed.

Sales revenue. This line is the total line of the **Revenue spreadsheet**.

Costs. This line is the total costs line including inflation from the **Costs spreadsheet**.

Cash flow before financing. This line represents the balance of the project on each month without considering the costs of financing.

Financing expense (fees and interest). This is an amount of fees and interest to be paid for the loan. It is calculated on the basis of the monthly cumulative debt and the assumed interest rate.

Developer's own funds. This line shows the funds invested by the developer into the project or planned to be invested.

Loan. This line reflects the monthly disbursement of the loan. In the attached case study it is assumed that the interest will be paid out of the loan amount. The amount of funds needed every month is a sum of the funds needed by the project (negative figure in cash flow before financing line) and financing expense.

Repayment. This is the expected rate of the repayment of the loan.

Cumulative debt. This is the amount of borrowed funds per month. The interest is calculated on the basis of these figures.

Remaining debt. The outstanding debt is the difference between the cumulative debt and the repayment.

Cash flow after financing. This line reflects the cash flow after the financing. It includes the loan disbursement and repayment and the interest repayment.

Net Present Value (NPV). In the calculation of net present value of the project it is important to use a discounting rate that reflects not only the inflation but also the opportunity cost of an alternative investment. In the Russian market it is possible to assume that the bank will utilize funds from the interbank loan market or state security market as a source of funds for the developer's loan. Thus, the discounting rate should be equal to the rate of the interbank loans plus a premium for risk. The interbank loans to use as a comparison should be for the period of time comparable with the terms of the proposed loan. Since developer's loans involve some new risks for the banks, a premium should be added. There is also a possibility to use as a discounting rate, the rate of the commercial bank deposits again with a premium added for risk.

5 Product Types and Relation to Market

Having conducted a thorough market analysis, analyzed potential sites, and then prepared a financial analysis, the developer is in a position to finalize his project. At this point, all project assumptions should be reviewed to ensure that the product being offered to the market responds to market demand while at the same time is still profitable. The following section is a summary of various approaches to what should be an ongoing review of a project as it is being constructed and marketed to buyers.

5.1 "What the Buyer Wants"

"What buyer wants" is derived from market analysis and is specifically translated into the design of the actual housing unit to be offered. Market research should probe the potential customers to discover basic wants and needs, and the amount of money that the customer is willing to pay to satisfy those wants and needs.

At a basic level is the need for shelter; this should be translated into the maximum size housing unit the customer can afford. Above the basic subsistence level are other customer desires including privacy and status. Whatever the size of a housing unit, efforts should be made to satisfy these portions of customer demand in the design of each home.

Placement of windows will affect privacy as well as add to the illusion of larger size. A visible and attractive entrance, both to the housing development as well as to the individual unit will enhance the feeling of status to the occupant. Generally little emphasis appears to be given to building orientation. Obviously orienting units to receive sun in the winter is a good selling point for those units.

The selection of properly designed mechanical systems and careful selection of materials and finishes, with a consideration for future maintenance, becomes an excellent selling tool.

Features of the Russian demand should be taken into consideration, such as excellent security, storage areas, since in the past little storage has been provided. The design of the kitchen must be emphasized because of the Russian life-style. One or more balconies or lodges should be provided. Parking facilities are becoming an important selling point. Every effort should be made to include European appliances and equipment.

In summary, when designing both the housing development and the individual unit, the developer must use the market research to focus on the needs and desires of his customers, and incorporate the satisfaction of these desires into the unit size, shape, amenities, interior finishes, building technology, and balance these inclusions against his costs.

5.2 Matching Design to the Buyer's Preferences

Housing design starts with market research and proceeds through consideration of constraints and opportunities related to the site, to the determination of whether houses will be flats in a multi-story building, attached one, two or three story "townhouses" or single family detached cottages, or a combination of the above product types. Individual homes should be designed as part of the overall development, not designed separately and then placed on the land use plan.

The customer demand for maximum size, privacy, status and minimum maintenance should be tailored to fit the conditions of the site. For example, on a sloping site, additional useable space can be designed into an individual dwelling unit by utilizing lower level space with windows, which otherwise would be below the ground. Views from units can be focused above or between other units. If market research calls for flats in a multi-story building, special attention should be given to views from various floors, especially from balconies. For example, balconies should be designed as "outdoor rooms" with space for table and chairs, if possible. We see in Russia a large number of balconies enclosed and used as an additional room, or for storage. As a possible selling point, developers should consider selling special balcony enclosure kits as an add-on option to help customize apartments to buyer's preferences. Regardless of what type of units are designed as part of the site plan, developer must focus on the needs and desires of customers, as discovered by market research.

5.3 Site Considerations

Site development considerations will affect layout of infrastructure, utilities and roadways, and will dictate number of houses to be built on the site and in what configuration, all subject to results of market research as to customer preferences. Each site has its special characteristics. As real estate markets develop and land prices become an important component of project costs, creating designs that efficiently use a site's best characteristics will become an important marketing tool, and ultimately a means to increasing the developer's return. Efficient site layouts can increase the number units on a site while still preserving desirable characteristics making the site more attractive to buyers and provide a means for increasing unit prices.

5.4 Finalizing the Product

Compromises must be reached between customer preferences and cost constraints, site conditions and financial constraints on the part of the customer. The greatest effort must be made to match the product to the market demand.

A vision of the final product must be thought through in the planning stage to minimize unforeseen happenings. All of the above will generate project costs and time of market absorption.

5.5 Marketing, Selling and Operation of the Project

5.5.1 Marketing after the Project Starts

Market research should be utilized for more than determining price and size of product to be offered. Well conducted research will identify types of potential customers as to age, household size, income level and many individual buyer preferences. The results of this research should be used in selecting the sales staff, advertising campaign, and merchandising and promotion.

One crucial result of market research is a prediction of the time of absorption of the product by the market. Predicting the time required for the project will generate the size and qualifications of staff and all related expenses for the life of the project, and therefore the cost of indirect construction expenses as well as the portion of home office overhead administration costs. For example, if the market research predicts a rapid absorption by the market of a basic low priced product, selection of construction staff should be focused on high volume well organized production oriented construction manager and superintendent. Sales staff should be selected to relate to customers with a background similar to his. If the market is for a more elite product, personnel should be selected to reflect the product and to be able to deal with more discriminating customers.

After the type of staff has been determined, compensation for staff can be calculated on basis of skill levels required as well as alternative employment opportunities for staff. Incentives based on accomplishment should be set up, and at a level of compensation to attract persons who have the skills to earn at that level. Some Russian developers use their own employees to manage construction and others hire a construction contractor. Some Russian developers hire employees to be salesmen, and others hire real estate brokerage firms. The decision should be based on what the market research says is the skill level required and balanced against budgeted costs.

It is important that the developer visualize on a day to day basis what staff he will need, what support services they will need, and produce an actual budget. He can then calculate what percentage of sales revenue his estimated cost will be, for purposes of comparison with industry norms and other projects. He takes undue risk if he simply applies a percentage to determine budgeted cost.

5.5.2 Developing Market Strategies

Market strategy is based on market research. What potential customers should be contacted and how? Customers can be found by word of mouth, advertising, direct mail and other means. Product offered based on market research should be exposed to particular customers, not entire population. Marketing budget is set up on basis of what is required to reach pool of potential purchasers.

Based on market research, developer can construct a "profile" of his target customer. What will be his household size? Will the household be a family with one or two adults and how many children? What will be the income level required to purchase? Obviously this information is difficult to discover, but every effort must be made. The age of the target customer is important. Will he have accumulated wealth? Will he probably already live in the area of the development, or will he come from elsewhere, and if so, from where? All the above kind of customer characteristics based on market research should then be used to determine how to communicate to the target customer the existence of your development.

Merchandising includes all marketing efforts related to the product and the site, such as entrance details to present a sense of place and prestige; a model home, perhaps partially furnished to reflect the life-style of potential purchasers; landscaping, trees bushes and flowers, to demonstrate finished project; on-site and off-site directional signs which establish an image, and identity for the project.

Promotion includes all efforts to inform the community, including potential purchasers, of the existence and location of the project, such as articles placed in local newspapers, cooperation with local community groups, merchants, Chamber of Commerce, local government.

Advertising is for the purpose of telling potential customers what and where your project is. Very few purchases are the result of advertising. Advertising should be directed to groups who may have some interest in your project. Your advertisements should clearly state the location of your project, the product price, and a brief description of the product. The most cost effective marketing tool is a well developed on-site and off-site sign program, to enable your customers to find your project.

Sales Management includes the recruitment, selection, employment, payment and motivation of sales people, either employed directly by the developer or through a real estate broker sales organization. Salesmen must be trained to understand who the customer is and to determine what he wants. In addition, salesmen, whether employees or employees of a broker, should thoroughly understand the details of every house and be prepared to answer questions about future maintenance. The salesman must be selected to match the customer and the product.

After items 5.5.1 and 5.5.2 above have been analyzed and estimated, a marketing budget can be set up, and allocated on a monthly basis over the life of the period of marketing of the project.

In a market economy, customers have choices. You will encounter competition producing essentially the same house as you do. To differentiate your self from your competition, consider offering guarantees of construction quality to your purchasers. Good quality construction does not cost more than poor quality construction. Good quality construction is done right the first time, poor quality is re-done or left bad. Doing it right the first time is the result of the developer selection of contractors, sub-contractors, and workmen who are committed to good quality, and are paid if they produce it.

Construction Management may be the function of the developer or conducted through a hired contractor-builder. In either case basic management principles must be used: management by objective, responsibility coupled with authority, "clean break" between responsibilities etc. Above all, a carefully thought out plan must be prepared and continuously used on a monthly basis as a management and monitoring tool. Changes in the plan must be made to reflect actual present conditions.

5.6 Selecting a Lender

Having completed a business plan, the next step is to market it to various lenders and investors. Determining whether to market the plan to a commercial bank or to an investor depends on the terms being offered and the Developer's profit motives. Obtaining construction period financing from a commercial bank may be less costly since interest costs become a known cost in the project's cash flow once a loan is negotiated. In addition, establishing sound banking relationships with one or more bankers means that these resources will be available to finance the next project. Furthermore, when the Registration Law is passed, it should enable a developer to mortgage a property prior to building construction making it possible to use land as collateral for project based financing.

Once the business plan is complete, the developer should take it to several banks to ascertain the types of loan conditions that might be offered. Then a lender should be selected based on interest rates, rate and conditions of disbursement and repayment period. Cash flow spread sheets in Chapter 4 should be used to evaluate different terms and conditions to enable selection of those terms that result in the greatest profit to the developer. Requirements for additional collateral other than the project should be carefully evaluated to ensure that these conditions do not unnecessarily tie up the developer's assets and make the project more difficult to fulfill. In all cases, liens against the developers assets should be removed once the loan is repaid. This should be a condition of loan negotiations regardless of the type of loan.

Generally the best loan package is the one that offers the most flexibility in disbursement and repayment schedules since these may affect construction schedules more than higher interest rate charges. For most projects, the faster the product is launched on the market, the faster profits will be realized.

5.7 Summary

In summary, in a market economy, if the Developer is successful in identifying a target market, and efficient in executing his business plan to meet the market, he will succeed. To the extent he fails in either of these required functions, his project will be unsuccessful. As the market develops in Russia, competition for buyers will become more fierce requiring more careful planning if profit targets are to be met. At the same time, market development means that new

business opportunities will emerge to serve an expanding client base. A thriving Developer needs to be flexible in his approach to modify product types to reflect the demands of new buyers.

To be successfully use a business plan, the Developer should modify it throughout project development. Then when the project is complete and all units in it are disposed of, the Developer should review the plan to determine what went right and what went wrong. These lessons should be used to prepare the plan for the next project to ensure even greater success.

Above all, in a market economy must always remember that meeting buyer preferences is the key to successfully selling a project. Buyers have choices, they can buy units in the Developer's project or in his competitors. Keeping that fact in mind is the key to profitably developing projects in a market economy.

The three attachments to the manual contain a check list that should be useful in finally preparation of the business plan for a loan application; a more detailed description of Land Residual Analysis, and a description of public-private partnerships for housing development. The loan application check lists when used together with the check lists at the end of Chapters 2, 3, and 4 should provide a good means for putting the application together and then checking to be sure that it is complete.

ATTACHMENT 1 LOAN APPLICATION CHECKLIST¹

1 Key Project Information

1.1 Project Overview (½ page total)

- General project description (type, size, location, etc.)
- Name and address of Borrower
- Amount of loan request
- Status of project implementation (design approval, fully permitted, begun)

1.2 Description of Proposed Loan (½ page)

- Amount
- Purpose
- Interest rate
- Term
- Repayment Terms
- Collateral
 - description
 - value (based on appraisal)
- Other Sources of Financing
 - equity -- money/investment from the borrower
 - other loans
 - advances from sale of units
 - other

2 Description of the Borrower

2.1 Summary Information

- Name of borrower
- Address
- Legal form
- Date of founding
- Names of founders
- Major shareholders and their respective share ownership for all shares greater than 5%; also include a brief description of the shareholders

¹ Source: "The Program for the Financing of the Construction of Residential Real Estate" prepared by Don McCarthy

2.2 Overview of the Company

- Brief description of the company, its history and the major lines of business
- List of company officials and their respective responsibilities
- Number of employees by department
- Summary of any legal matters or lawsuits which the enterprise has been involved in previous 5 years

2.3 Development Experience

- Analysis of market success of prior development projects sponsored by the borrower (units built/sold, prices, absorption rate, profitability)
- Analysis of borrower's credit history with other real estate projects (how financed, amount borrowed, amount repaid, defaults)

2.4 Borrower's Financial Position

(NOTE: all financial information must clearly distinguish between actual and projected figures)

- Summary of major accounting policies used by the enterprise where choices exist (for example cash versus accrual)
- Summary financial information (from the past three years)

	19xx	19xx	19xx
Total Assets			
Total Liabilities			
Net Worth			
Debt/Equity			

- Analysis of company's financial position
 - key operating data
 - key financial data
- Off-balance sheet items
 - operating and capital leases
 - other major commitments
 - major liabilities unrecorded in the balance sheet
- Analysis of future financial cash flow performance expected from all likely projects (not only in real estate) with major underlying assumptions

3 Project to be Financed

3.1 Summary Project Information (1-2 paragraphs each)

- Project description (type, size, location, etc.)
- Land ownership
- Construction materials
- Construction schedule

- Off-site infrastructure requirements
- Status of project approvals
- Status of project implementation (percent of project completed in terms of cost and physical construction)
- Project team (architects, engineers, etc.)

3.2 Total project costs

(NOTE: for uncompleted buildings, analysis must clearly distinguish between portion already completed and portion remaining)

- Construction
- Land (cost, value, lease fees, term of the leases)
- Infrastructure
- Preparation expenses
- Bases and assumptions for cost estimates

3.3 Detailed Project Description (1-2 paragraphs each plus maps and drawings)

- Description of site and surrounding area
- Building description
- Type and mix of housing units
- Commercial portion, if any
- How will building be managed after completion?

3.4 Summary Market Analysis (1-2 paragraphs each)

- Market demand for the type of construction and technology
 - profile of the final purchasers
 - similar projects elsewhere in market area
- Commitments from end users -- number and percent of dwelling units sold; leases or sales for commercial portion, if any
- Description of how the final buyers will pay for the units
- Project marketing strategies, pricing policies, advertising

3.5 Management Issues (1-2 paragraphs each)

- Project management (nature of borrower's organization and responsibilities, use of consultants)
- Indication of the method by which the borrower has acquired or will acquire materials and contract for works
- Description of any technical assistance required or envisaged for the project and the borrower, and likely sources of this assistance (for project implementation, business plan, technology, marketing, etc.)

4 Project Financing

4.1 Analysis of Project Financing

6/6

- Summary of financing sources for the project (IBRD, equity, advance sales, other loans, etc.)
- Assessment of firmness and status of financing sources

4.2 Detailed Financial Analysis (up to one page narrative plus table for each category)

- Analysis of cost of the main construction components, showing discrete construction phases and assumptions for future cost changes (using certified hard + soft schedules (adjusted as appropriate))
- Projection of current and future prepayments and selling price; and lease terms or sales prices for the commercial space, if any
- Project cash flow report for life of the project clearly showing major assumptions and source for all data
- Comparison of loan request to project value based on appraisal
- Sensitivity analysis (financial returns with varying assumptions concerning major risk factors affecting revenues and costs)

5 Additional Items

5.1 Market Reports

- Detailed market analysis include profiles of recent comparable projects in the local market such as number of units built, number of units sold, prices of units, etc. (independent analysis preferred)
- Appraisal of real estate project valuation of project using traditional methods of appraisal, with appropriate supporting documentation for all major assumptions (independent analysis preferred)
- List of buyers for the units
- Sales contracts (for home buyers)
- Lease agreements (for commercial space)

5.2 Maps and Site Plans

- Map showing the location of the housing project
- A site plan showing the general design of the proposed project
- A site plan illustrating road access and infrastructure include water, sewage, gas, heating and electricity
- Photos of site and building (if started)
- Renderings of facades
- Representative floor plans

5.3 Project Legal Documents

- Legal description of land, evidence of land ownership or lease
- Purchase agreement (for acquisition of uncompleted building)
- Project approvals from local governments:

- site plan approval
- general plan approval
- building design approval
- utility hook-ups

5.4 Company Legal Documents

- Organizational chart of the company as well as any subsidiaries
- General charter documents including:
 - Charter
 - Shareholder's agreement
 - Shareholders listed by percent of ownership
 - Registration certificate as a company

5.5 Miscellaneous

- Environmental Report
required for new construction of 10 or more units on virgin or newly acquired land
- Insurance policy against construction hazards
- Contractor agreements, if any

ATTACHMENT 2 LAND RESIDUAL ANALYSIS

Overview

In any tendered bidding for development rights to a specific site, the fundamental question for developers is: what is the value of such development rights? In market economies, developers submit bids to purchase a freehold interest in land and typically calculate the price they are willing to pay using a technique termed *land residual analysis*. The underlying rationale and approach behind this technique is presented below to serve as a means or framework for Russian developers to estimate the value of development rights to land parcels.

Approach

At its most basic level, the land residual analysis is based upon the following equation involving four variables:

$$\text{Total Sales Revenue} = \text{Land Value} + \text{Construction Cost} + \text{Developer's Profit}$$

Rearranging this equation and solving for Land Value yields the following relationship:

$$\text{Land Value} = \text{Total Sales Revenue} - \text{Construction Cost} - \text{Developer's Profit}$$

Therefore, the maximum bid price for a development site depends on the following factors:

- what type and how many housing units can be constructed on the site
- what it costs to build them
- what price the housing units can be sold for
- how much profit the developer wants to earn

With minor modifications, this approach can be adopted to apply to mixed-use projects consisting of both housing and commercial space.

Example

Total Construction Cost. Drawing upon a 1993 case study of a 45-unit housing demonstration project in Ekaterinburg, Table A summarize total development costs. Based on Table A, the Total Construction Cost is calculated to be 183,692,000 Rubles as follows:

	<u>In Rubles</u>
Total Infrastructure and Site Work	15,600,000
Total Building Cost	144,132,000
Contingencies (15% of Costs)	23,960,000
Total Construction Costs	<u>183,692,000</u>

Table A
Demonstration Project Development Cost, February 1993

Cost Component	Rubles ('000)
On-Site Infrastructure and Site Work	
Heating	10,600
Sewers	1,100
Water	1,400
Electric	350
Communications	550
Grading, Roads and Landscaping	1,600
Total Infrastructure & Site Work	15,600
Building Cost	
Foundation	5,078
Walls	24,090
Windows and Doors	20,724
Ceiling	8,318
Roof	11,720
Finishes	33,021
Labor and Contractor Overhead (40%)	41,181
Total Building Costs	144,132
Total Infrastructure, Site Work & Building Costs	159,732
Contingencies (15% of costs)	23,960
Profit (20% of Total Sales Revenue)	90,272
TOTAL CONSTRUCTION COST	273,964
TOTAL COST PER SQ. M. (5,035 sq.m.)	54,412
Source: Feasibility Study Design Plan, 1993	

Projected Sales Revenue. Table B shows the projected sales revenue, based in each unit type, to be 451,360,000 Rubles. Projected sales revenue figures need to reflect results of the developer's market analysis which should indicate the price range potential home buyers are willing and able to pay for the different types of units proposed for development.

Table B Projected Demonstration Project Sales Revenue, February 1993					
Unit Type	Number of Units (units)	Size of Unit (sq.m.)	Selling Price per Sq.M. (R./sq.m.)	Selling Price per Unit (R.)	Sales Revenue (R.)
2 room	5	73	100,000	7,300,000	36,500,000
3 room	16	96	95,000	9,120,000	145,920,000
4 room	14	119	90,000	10,710,000	149,940,000
5 room	10	140	85,000	11,900,000	119,000,000
Total	45				451,360,000
Average		110.4	90,853	10,030,222	

Source: PADCO Feasibility Study Estimate, 1993

Developer's Profit. In this case, the developer's profit is calculated to be 20 percent of gross housing sales or 90,272,000 Rubles. In addition, the developer would receive payment for his time, labor and management (as reflected in the construction cost estimates). The project is extremely profitable in terms of the developer's return on equity invested. If we assume that the developer pre-sells all units before starting construction and that the buyers would make payments to cover the cost of actual construction, the developer's equity contribution would be limited to the purchase price of the land.

Residual Land Value. Using the residual land value method, Table C presents the estimated land value of the demonstration project site to be 177,396,000 Rubles, or 23,700 Rubles per square meter for a site size of 7,500 square meters. Again, this figure was calculated using the residual land value formula:

$$\text{Land Value} = \text{Total Sales Revenues} - \text{Construction Cost} - \text{Developer's Profit}$$

Table C Demonstration Project, Estimated Developer Land Bid, Based on Residual Land Value Method, February 1993	
	Rubles
Total Gross Sales Revenues from Project	451,360,000
Total Construction Cost	183,692,000
Total Gross Developer Profit	90,272,000
Residual Land Value	177,396,000
Residual Land Value per square meter	23,700
Source: PADCO Feasibility Study estimate, 1993.	

Conclusions. The proposed housing project described above appears to be economically and financially feasible. However, there are many variables that need to be considered to ensure that the project is a success. Throughout the analysis, it is assumed that the developer will index prices for inflation and that purchasers will be able to absorb inflationary costs (if the developer successfully negotiate fixed price construction contracts, escalations may be minimal). Additionally, there is always the need to address the issue of project timing and scheduling; significant delays in obtaining requisite development approvals, procuring construction materials and/or pre-selling units can negatively affect the financial feasibility of a proposed project.

ATTACHMENT 3

PUBLIC-PRIVATE PARTNERSHIPS FOR HOUSING DEVELOPMENT

1 Overview

The Existing Situation in Russia

Public-private partnerships for housing development are not a novel concept in Russia. In fact, most housing development projects in Russia require some form of collaboration or “partnership” between the municipal and private development sectors for two reasons: 1) the vast majority of prime, developable land is “owned” by municipalities; and 2) securing “off-site” infrastructure to service a given development site requires that developers negotiate with municipal officials on the terms and conditions of payment for such improvements.

In Russia, most public-private partnerships are created to finance infrastructure. Limited capital improvement budgets and the lack of alternative infrastructure financing instruments severely constrain municipalities from upgrading existing infrastructure and providing infrastructure services to new development sites. Therefore, Russian municipalities increasingly turn to private developers to “participate” in the financing of infrastructure required to service sites proposed for development.

The public-private partnerships that have been created in Russia are most commonly in the form of compensation arrangements or exactions that developers will provide a given municipality in exchange for the provision of requisite “off site” infrastructure improvements. These compensation arrangements must be negotiated before a developer can obtain development rights to a desired parcel.

Partnership Arrangements in Russia

The partnership and compensation arrangements between Russian municipalities and developers have assumed a variety of forms. Many municipalities have rigid rules or set guidelines regarding the amount and form of compensation required to obtain development rights to land. One common form of compensation for residential projects is a predetermined percentage of completed housing units which the municipality may, in turn, allocate to households on the local waiting list. *In Moscow these shares were determined as 50%. It means that 50% of the total area of the housing units should be given free of charge to the Moscow government. But in January 1996 by the special decree the compensation was changed to 40%. The developer has the prior right to buy back this units. Usually the price of this purchase determined by a special committee and it is somewhere between the cost of units and their market price. Depending on the developer it is possible sometime to buy back some of the units for the cost.*

Another arrangement is a set fee, often calculated as a percentage of the property’s total development cost. In this case, the municipality would use the fee income to finance the necessary off-site infrastructure improvements. *In Yekaterinburg the fee was determined as*

33% of the construction cost. But recently it was decreased to only 20%. This trend to decrease the fee for the lease right can be found in many cities. Housing projects that are 40% or more financed out of local or federal budget are exempt. In lieu of a set fee, it is sometimes possible for developers to finance and undertake the infrastructure improvement work themselves.

The third most common arrangement is simply a combination of the first two: a percentage of the project, defined in terms of housing units or in square meters, and a set fee. *In Sankt-Petersburg the developer is supposed to give out 7% of the units to the City Administration and to pay \$40 per square meter of the total housing area to be constructed.*

An Assessment of Russian Partnerships

The public-private partnerships that currently exist in Russia are very different than the partnership arrangements typically found in market-oriented economies. Despite the existence of fairly rigid rules that many Russian municipalities have set pertaining to compensation arrangements, the one-on-one negotiation process between developers and municipal officials can (and does) lead to some deviation from these rules. In other words, the process itself is not transparent and can lead to the transfer of funds or other types of remuneration "under the table." Fundamentally, this lack of transparency can also cloud the ability to account for how exaction fees are actually spent, when, where and by whom.

Another significant problem with the Russian public-private partnerships, as they are currently structured, is that the compensation arrangements are not market-based. Exactions, for example, are often more than the cost of infrastructure improvements. As a result, developers must pass on these exactions to the end-buyers, effectively increasing the cost of housing. Additionally, because exactions are commonly levied on a fee based on a set percentage of a project's cost or value, exactions can also skew development toward higher end projects. Exactions which have no bearing on the market can also serve to inhibit development altogether. *Recognizing that development activity had come to a standstill, Ekaterinburg reduced its exactions from 33% to 20% of total project costs.*

Finally, even if the exaction fee is equal to the cost of providing off-site infrastructure, such costs should not entirely be borne by a single developer if the improvements will serve additional sites. In many cases, developers have few alternatives other than to assume these costs and, in turn, attempt to pass these costs along to the end-buyers. Again, this situation exemplifies a distorted market whereby prices are inflated to accommodate the cost of providing "public" infrastructure.

An Alternative Approach

A more formal and more proactive approach to public-private partnerships can be characterized as an open-tender process which promotes greater competition among developers. In market-oriented economies, public-private partnerships are typically structured using requests for proposals (RFPs) to solicit developers' interest in developing projects on municipally-owned land. In addition to promoting competition, the RFP process also has the advantage of being more transparent and objective than one-on-one negotiations between a single developer and municipal officials.

Presented below is a description of the various steps involved in structuring public-private partnerships using RFPs. This description is based on the successful use of RFPs in Bulgaria where the obstacles associated with the transition to a private, market-based housing delivery system are similar to those in Russia. The primary purpose of this chapter of the Manual is to provide interested private developers and municipal officials with the necessary background information to design new, effective approaches for promoting housing development in Russia.

2 The RFP Process Step-by-Step

Detailed proposals for housing development are solicited from private developers through instruments known as RFPs. Prepared by municipalities, RFPs are intended to: encourage open, fair competition; elicit proposals that provide a complete and detailed description of a developer's plan allowing for the judgement of an offerer's capability to carry out the project; and protect the municipality's financial and legal interests.

A sample RFP for three municipally-owned vacant parcels in Boston, Massachusetts is presented in Attachment 4. In general, an RFP should include at least the following:

- Mandatory performance standards;
- General and special conditions or terms under which the developer will operate;
- Time frame for housing construction;
- Criteria by which competing proposals will be evaluated; and
- Schedule and process for review of proposals and selection of "winning" developer.

Because the RFP approach is principally managed by municipalities, the following steps focus on the role of municipal officials in initiating and managing the overall process. Section III summarizes the role of private developers at various stages of the RFP process.

Step 1: Establish Specific Development Objectives. It is important for a municipality to establish specific development objectives before initiating the RFP process. The municipality can use the RFP process to achieve housing development objectives such as: 1) stimulating housing development by the private sector; 2) promoting the development of affordable housing; 3) preserving historic structures and landmarks; 4) maximizing economic and social returns on municipal assets; and 5) a range of other more specific objectives related to a particular site. The RFP should clearly outline the desired objectives; it is likely that a municipality will have multiple objectives for a site and such objectives should be ranked in order of importance

Step 2: Identify Municipal Sites for Development. Municipalities should carefully consider the suitability and attractiveness of a site before it is selected for a housing development project subject to the RFP process. In examining candidate sites, municipalities (as well as private developers) should investigate the following issues:

- Is the site location appropriate for housing and would housing be consistent with existing land use plans for the site and surrounding area?
- Is the size of the site appropriate for private investment?
- Is there access to critical infrastructure and, if not, how and when will such infrastructure be built?

- Is there clear title to the site proposed for development?

The importance of site location and size is directly related to market demand. Because the private developer would assume the risk and responsibility of selling the housing to prospective buyers, it is critical that the proposed site be located where there is effective demand for the proposed housing. At present, effective demand is greatest for housing in infill locations with access to central city amenities and services. Appropriate site size is dependent on a number of factors including, but not limited to, the strength and nature of the local housing market, surrounding land uses and ability to raise sufficient capital to finance the project at the size and scale proposed.

Access to infrastructure is another important factor in a site's attractiveness to private developers. Developers ordinarily assume the responsibility for on-site infrastructure improvements according to standards established by the municipality; however, the responsibility for "off site" infrastructure improvements is subject to negotiation. Given their limited capital improvement budgets, Russian municipalities are currently requiring private developers to finance "off site" infrastructure improvements which, in turn, increases the cost of housing to the end-buyers. As part of the due diligence process, private developers need to assess how "off site" infrastructure improvement costs would affect the financial feasibility of proposed development projects.

A fundamental prerequisite for private developers to participate in a partnership with a given municipality is the existence of clear title to the site proposed for development. Even though municipalities in effect "own" the vast majority of sites within their respective jurisdictions, it is critical for developers to ascertain that there are no liens or encumbrances that would impede the municipality's ability to award development rights for a specific site. Russian law presently prohibits municipalities from transferring freehold interests in lands under municipal ownership.

Step 3: Prepare and Release RFP. As part of the RFP preparation process, municipalities must undertake a number of activities including:

- ***Clarifying the Permit Approval Process and Simplifying if Necessary.*** The permit approval process should be streamlined so as to reduce the developer's uncertainty regarding costs and scheduling. Development permits generally fall into two categories. One category includes permits for infrastructure connections to water, sewer, electricity, gas, telephone and heating lines. The other type, associated with the municipality and the state, permits the developer to develop the site (i.e. planning permits, building permits, historic/cultural permits, etc.). At a minimum, the RFP should contain a complete listing of all permits required and the sequence of steps that the developer needs to go through in order to secure all necessary permits.
- ***Defining Responsibilities for Infrastructure Improvements.*** The RFP should be clear as to the developer's responsibilities for on- and off-site infrastructure improvements *vis a vis* what responsibilities will be assumed by the municipality. For off-site improvements, the RFP should specify what fees or exactions will be levied on the developer to cover costs. Additionally, the RFP should identify who is responsible for such improvements and when improvements will be completed.

- ***Defining Relocation and Site Clearance Responsibilities.*** Relocation and site clearance responsibilities should be defined in order to ensure that development can proceed without unnecessary delays. If the project to be constructed is on a site with occupied housing, the municipality may be responsible for relocating tenants to other suitable housing. If the developer is responsible for site clearance, the value of materials salvaged from the site should be taken into consideration in the financial feasibility analysis.
- ***Conducting Market Analysis.*** To ascertain the financial feasibility of proposed development projects requires an analysis of the local housing market. This could be achieved by requiring private developers to submit a market study or analysis as part of their proposals. Alternatively, the municipality could conduct a housing survey (a method used in market economies as well) which would yield valuable information to the municipality and could also be shared with private developers to help them better understand the market for new housing.
- ***Defining Proposal Selection Criteria.*** Developers need to be assured that they are competing on a “level playing field” and that the selection process is objective and transparent. In order to ensure that developers clearly understand how their proposals will be reviewed and evaluated, proposal selection criteria needs to be explained in the RFP along with the process and time frame for proposal review. Listed below are the major criteria by which development proposals are usually evaluated:

Conformance to municipal objectives. The extent to which the proposal conforms to city-wide and site-specific objectives, as stated in the RFP.

Proposed compensation for development rights. The compensation arrangements (usually in the form of completed housing units) proposed by developers for development rights to the site.

Performance. The quality of the development team, including references for the developer, contractors, investors, architects, engineers and person or organization responsible for marketing the project.

Aesthetics. The design and exterior appearance of the proposed building(s) and grounds.

Quality of development. The quality of the proposed development project.

Financial feasibility. The likelihood that the project could be built and marketed as proposed.

Prior to release of the RFP, it is advisable to develop a well-conceived advertising strategy to ensure a favorable response rate. Such a strategy could include announcements in newspapers, on television and on the radio.

Step 4: Prepare a Model Development Agreement. The instrument that provides the basis for consummating a public-private partnership is the Development Agreement. This is a comprehensive legal document that specifies the performance and auditing requirements for a particular project. The Development Agreement sets forth the specifications for all aspects of

the project, including site preparation and utilization, infrastructure provisions, financing, phasing, scheduling, etc. A model Development Agreement should be prepared for inclusion in the RFP so that developers understand the legal ramifications of entering into development partnerships with municipalities.

Step 5: Review Development Proposals and Select Winning Developer. The RFP submission, evaluation and negotiation process must ensure fairness to all parties. Submission requirements should not unnecessarily preclude smaller or more recently established firms from competing. Evaluation criteria should be pre-specified in the RFP and incorporate a numerical ranking system for judging proposals. A numerical ranking system ensures that proposals are evaluated on an objective rather than a qualitative basis.

Municipalities should also establish official proposal review and selection committees. Such committees should comprise of appropriate municipal personnel and also include non-municipal employees. The purpose of including non-municipal employees is to add expertise as well as to promote greater transparency to the proposal review and selection process. Examples of appropriate non-municipal professionals for such committees include business leaders, local residents and community interest groups.

Step 6: Negotiate and Sign Development Contract with Developer. Once a “winning” developer has been selected, it is necessary to conduct final negotiations regarding all aspects of the proposed public-private partnership. The Development Agreement typically provides the foundation for such negotiations and, when signed by appropriate parties, serves as the development contract between the private developer and municipality.

Step 7: Monitor Project and Enforce Development Agreement. Subsequent to finalizing negotiations and signing of the Development Agreement, the municipality’s role becomes one of monitoring the project against the proposed construction schedule and predefined performance standards.

A graphic portrayal of the RFP approach to structuring public-private partnerships is shown in Figure 1.

3 The Role of Private Developers in the RFP Process

Whereas the preceding section described the RFP process in terms of municipal roles and responsibilities, this section focuses on the role of private developers at various phases of the development process.

Figure 2 summarizes the respective roles of private developers and municipal officials according to five phases of the development process. As described below, private developers are most directly involved in three phases: Project Design and Proposal Preparation; Final Design and Regulatory Approval; and Project Construction.

Project Design and Proposal Preparation. Upon the release of the RFP, interested private developers undertake the following activities:

- Review the RFP
- Conduct Market Research

- Prepare Preliminary Designs
- Prepare Financial Feasibility Studies
- Assemble and Submit Proposal

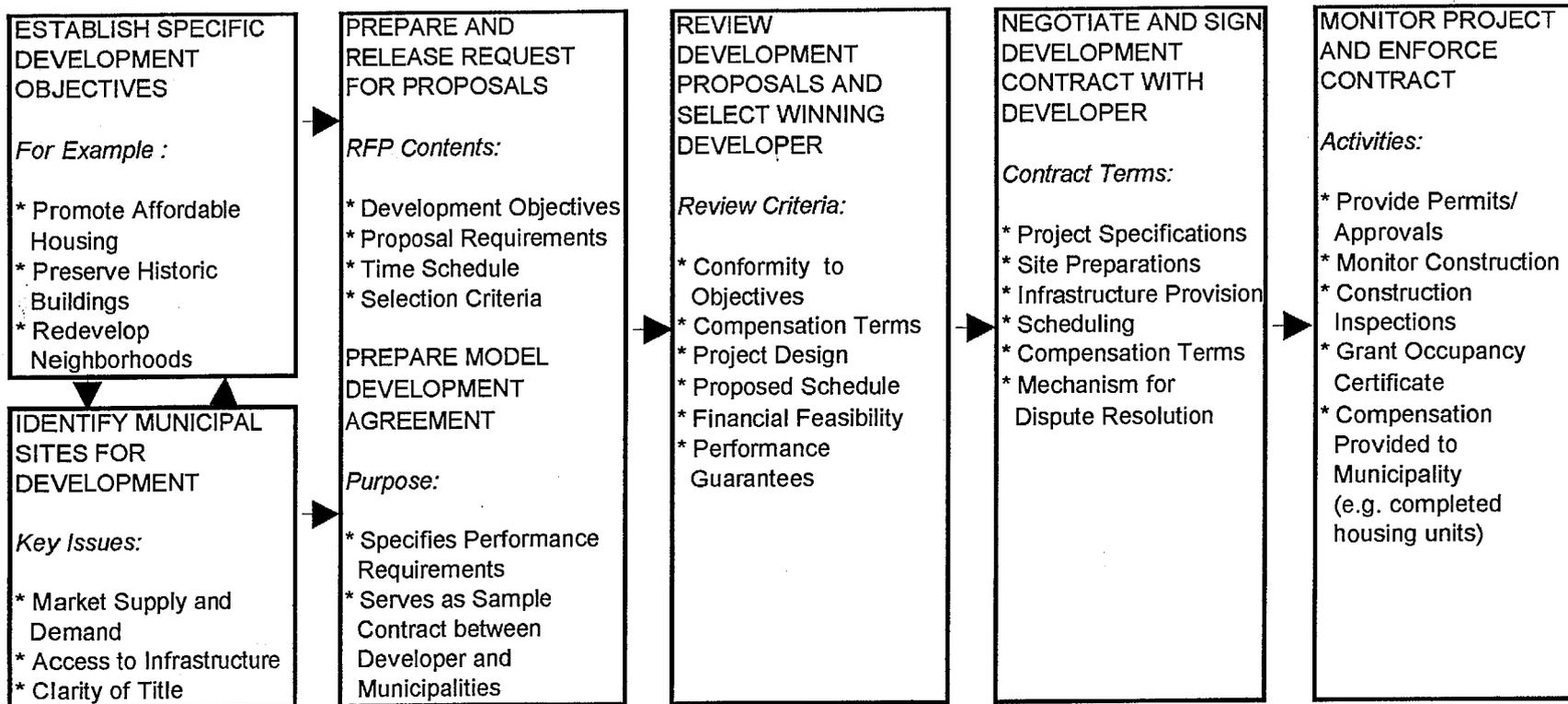
At any stage during this process, developers may decide not to prepare or submit a development proposal. Market research results, for example, might suggest that the size, location and/or unit sales prices of the proposed development project might not correspond with existing market demand. Furthermore, the financial feasibility studies may indicate that project expenses exceed the realistic sales prices for the proposed housing units.

Shortly after the release of RFPs, it is common for municipalities to host a pre-bidding conference to allow interested developers to get further clarification on the RFP itself as well as the overall proposal review and selection process. Pre-bidding conferences also provide developers with a better sense what other firms will be competing for the project.

Final Design and Regulatory Approval. After the proposal review and selection process, the “winning” developer typically enters into final negotiations with the municipality. These negotiations lead to a signing of the Development Agreement and allows the developer to prepare final designs and submit plans to the municipality for approval. Additionally, the developer will begin to secure project financing during this phase of the development process, either through pre-sales, bank loans or a combination thereof.

Project Construction. The project construction phase requires that the developer manage the construction process to ensure that all terms and conditions regarding the Development Agreement are met. Additionally, the developer will continue to market the project to prospective home buyers throughout the construction phase and, to the extent possible, pre-sell units to secure additional capital for construction. Upon project completion, the developer will compensate the municipality for development rights to the site in the form of completed housing units or per other arrangements, as specified in the Development Agreement.

Figure 1
A Graphic Portrayal of Public-Private Partnership Process Underlying RFPs



NOTES

* These two activities are interrelated and typically occur simultaneously
 * It may be necessary to enact local ordinances permitting the process to proceed

* A well-conceived advertising strategy is critical to a favorable response rate
 * Streamlining the permit and approval process will reduce uncertainties and expedite the project

* It is critical that this process is viewed as fair and objective, by developers as well as the public at large

* The purpose of such negotiations is to enhance predictability and reduce the risks to both the municipality and the developer

* Should there be a breach of contract by either party it may be necessary to initiate legal proceedings

Figure 2
Roles and Responsibilities of Private Developers and Municipalities
at Different Development Phases of the RFP Process

Development Phase	Roles and Responsibilities	
	Private Developers	Municipalities
Project Initiation		<ul style="list-style-type: none"> • Define Project Objectives • Identify Potential Sites • Conduct Market Research • Conduct Land Valuation Analysis • Structure the Project • Prepare, Advertise and Issue the RFP • Conduct Pre-Bidding Conference
Project Design & Proposal Preparation	<ul style="list-style-type: none"> • Review the RFP • Conduct Market Research • Prepare Preliminary Designs • Prepare the Financial Feasibility Studies • Assemble and Submit Proposal 	
Proposal Review & Selection		<ul style="list-style-type: none"> • Review Proposals • Rank Proposals According to Pre-defined Criteria • Select a Winning Proposal
Final Design & Regulatory Approval	<ul style="list-style-type: none"> • Negotiate with Municipality • Prepare Final Designs • Submit Plans for Approval • Secure Project Financing 	<ul style="list-style-type: none"> • Negotiate with the Private Developer • Review Final Designs • Issue a License to Build
Project Construction	<ul style="list-style-type: none"> • Manage Project Construction • Market Housing Units • Compensate Municipality with Completed Units 	<ul style="list-style-type: none"> • Monitor Project Construction • Obtain Compensation