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PROJECT FINANCING IN THE CASE OF RESIDENTIAL CONSTRUCTION IN BELGRADE

Projektno finansiranje na primeru rezidencijalne
gradnje u Beogradu

Abstract

Project financing is a method of funding in which the creditor primarily takes into account revenues generated by individual project, as the source of repayment and security for the risk exposure. Risk assessment is a critical phase for investor and creditor in project financing as it bears responsibility for the assessment of project's ability to repay debts (loans), cover costs as well as for the payment of dividends to shareholders. Designed and expected cash flow generated by the project is strongly influenced by risk. If the risks are not adequately assessed and anticipated, there should be a decrease in cash flow or the deficit. If cash flow is not sufficient for servicing commitments toward lenders, the project is unsuccessful and needs to end.

On the basis of the analysis of principles and product offers of the project financing banks which are operating in the Republic of Serbia (Banca Intesa, Erste Bank, Sberbank and UniCredit Bank) it is practically shown which are the principles of the project financing of residential branches in Zarkovo (part of Belgrade) and what are the advantages for the investor (concerning assets, cash flow projections in the function of repayment of loans, the basis for the approval of project financing – future revenues generated by the project, the legal status of borrowers and risk distribution).

Key words: *project financing, risk exposure, cash flow, residential construction*

Sažetak

Projektno finansiranje je metod finansiranja u kome kreditor prvenstveno uzima u obzir prihode koje generiše pojedinačni projekat, kao izvor otplate i obezbeđenje za izloženost rizicima. Procena rizika je kritična faza za kreditora i investitora u projektom finansiranju jer snosi svu odgovornost za procenu sposobnosti projekta da otplaćuje dugove (pozajmice), pokriva troškove, kao i za isplatu dividendi akcionarima. Projektovani i očekivani novčani tok koji generiše projekat je pod snažnim uticajem rizika. Ukoliko rizici nisu na adekvatan način procenjeni i anticipirani, dolazi do smanjenja novčanog toka, odnosno, deficita. Ukoliko novčani tok nije dovoljan za servisiranje obaveza prema kreditorima, projekat je neuspešan i potrebno ga je okončati.

Na osnovu principa i ponude proizvoda projektnog finansiranja banaka koje posluju u Republici Srbiji (Banca Intesa, Erste banka, Sber banka i UniCredit banka) praktično je prikazano koji su principi projektnog finansiranja rezidencijalne gradnje u Žarkovu (delu Beograda) i koje su prednosti za samog investitora (u vezi sa imovinom, projekcijama novčanih tokova u funkciji otplate kredita, osnovama za odobrenje projektnog finansiranja – budući prihodi koje generiše projekat, pravnim statusom korisnika kredita i raspodelom rizika).

Ključne reči: *projektno finansiranje, izloženost rizicima, novčani tokovi, rezidencijalna izgradnja*

Introduction

“The project is temporary endeavor undertaken to create a unique product, service or result [19, p. 5].” Project financing, as a model of investment projects financing, was created as an expression of the need for implementation of the projects for which investors did not have sufficient own funds or sufficient creditworthiness for borrowing. It found its use in capital-intensive industries in highly profitable projects. In other words, when a project can be separated into an independent legal and economic entity which brings such revenues to pay out without difficulties executed investments, as investors and creditors, then we talk about project financing [20]. Project financing should be distinguished from direct, corporate financing or general company lending [18]. Participants in project financing share the profits, but also potential risks that arise from their partnership in the process of project implementation. Risk is a measure of the probability and consequences if defined objectives of the project are not reached [12]. It represents insufficient knowledge of future events and can be defined as a function of uncertainty and possible resulting damage. The risk may also be defined by the causes of risks and precautions to avoid danger.

In accordance with the Basel agreements (so called: Basel II, [22]), project financing is a method of funding in which the creditor primarily takes into account the revenues generated by individual project, as the source of repayment and security for the risk exposure [2]. *Cliffor Chance* says “the term project financing is used for a wide range of financial structures. In any case, these structures have one common characteristic: the financing does not depend primarily on the creditworthiness of the sponsors/investors, or on the value of the property, but the performance of the project itself.”

This type of financing is usually suitable for industries such as construction, tourism, energy, infrastructure, waste material, entertainment, telecommunications, transport; oil, gas and mining; health, social protection and education [15]. A list of acceptable industries for project financing is defined by the Basel II framework [22], in the part *First pillar* – minimum capital requirements, where are precisely defined certain types of banks’ exposure to risks. Namely,

within the class of assets of the economy are the following sub-classes of specialized lending: 1. *Project financing* – including the financing of power plants, mines, process industries, oil resources, telecommunications, media and technology; 2. *IPRE (Income Producing Real Estate; Corporate/Special financing)* – the purpose of credit is to build and/or buy: business premises; residential buildings; hotels; hypermarkets and shopping centers; logistics centers; complex, gyms, cinemas; technology parks; 3. *Financing facilities (Corporate/Special financing/Financing facilities)* – financing the purchase of buildings, movable property: planes, ships; trains; fleet; satellites; 4. *Commodity financing (Corporate/Special financing/Commodity financing)* – includes financing stocks, reserves in the commercial exchange of goods (oil, metals, grains, etc.).

The main goal of this paper is to show the practical implementation of the residential construction project, based on the methodology used by commercial banks in the Republic of Serbia. The aim of this paper is to point out the advantages of project financing in relation to the standard investment projects financing by commercial banks. Accordingly, this paper is organized in the four parts. The introduction will determine the concept of the project and project financing. In the second part will be presented the principles of project financing applied by commercial banks in the Republic of Serbia. In the third part, a practical example of the project financing of residential premises in Belgrade will be shown. Finally, within part four, conclusion as well as the main results of case study will be presented.

Principles of project financing of commercial banks in the Republic of Serbia

General principles of special financing of legal entities in the Republic of Serbia, based on the offers of four banks: Banca Intesa a.d. Beograd, Erste Bank a.d. Novi Sad, Sberbank a.d. Beograd and UniCredit a.d. Beograd will be presented in this chapter (see Table 1). Also, it will be presented the key factors that determine the project’s suitability for project financing as well as the key financial indicators for determining the justification, effectiveness and profitability of a specific project being considered for project financing.

General principles of financing: The case of special financing of legal entities

General principles of financing in the case of special funding of legal entities are [2]: (1) Placements are granted to registered legal entities (recommended to be newly established enterprises with the purpose of special projects). The founders of the new entity (*Special Purpose Vehicle – SPV*) can be legal entities and/or individuals with experience in the field of construction. (2) The primary source of repayment of the loan is at least 50% of cash flow from (future) operations of the project. Other sources of funding may constitute cash flow of guarantor or other projects. (3) The level of income and risk exposure of entity are not the basis for customer segmentation in the bank's balance (sheet). (4) As a part of its balance sheet, the possibility of customer migration from sub-class Corporate/Special funding to the sub-class of Corporate/General exists, based on the decision of the sector for risk management.

Special financing includes the fulfillment of the following conditions [2]: (1) The purpose of the credit is the purchase or re-financing of tangible assets; (2) The credit is approved to the company, established solely for the purpose of a specific project; (3) The Company that was established for the specific project has insignificant or no material assets, or activity, and therefore has insufficient ability or capacity for the credit repayment. (4) Future revenues that will be generated by the project represent the source of credit repayment.

In practice, a client's (enterprise's) – the borrower's several activities or projects have been financed by the Bank. Therefore, approval of new credit of special financing takes into account the following: (1) At least 50% repayment of a new exposure can be restored from regular cash flow from all existing projects or activities; (2) Cash flow from other

projects is available to legal entities established especially for a concrete project.

Considering the requirements of clients and experience within the parent group of local banks, the following models of special financing are used (see Table 1): (1) Financing the construction of residential and commercial buildings intended for sale; (2) Financing the construction of residential and commercial buildings intended for renting; (3) Financing the construction of tourism facilities.

By providing special financing banks want to help their clients in the construction of buildings which will be subject to sale or rent on the market, both in the big cities in Serbia and in the areas recognized as tourism centers. Serbia needs to upgrade its accommodation facilities in accordance with the EU standards, especially out of Belgrade and other big cities (in terms of population and industrialization level). The demand for creating a better quality in terms of products and services has become one of the most important strategic priorities currently being faced by hotels in general [17].

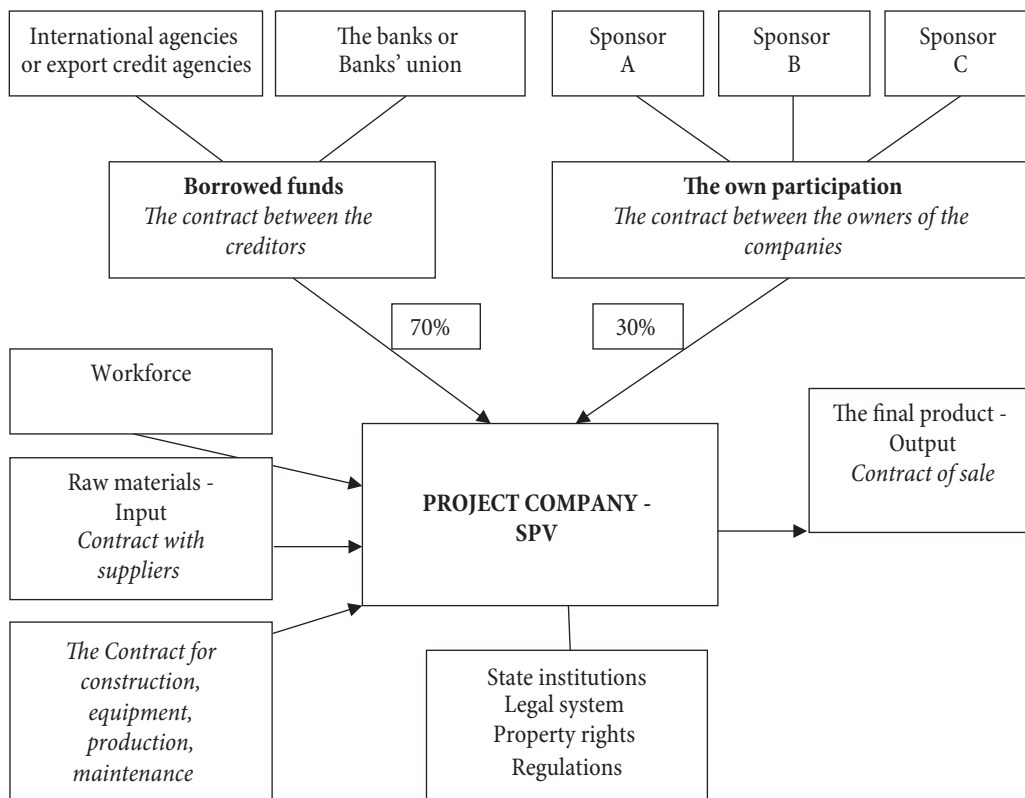
Amounts of credit due to the size and severity of projects can be up to 80% of the total project cost (generally 70%). It is recommended that the participation of investors, i.e. the borrower, is 30% of the value of investment as a sign of the willingness of the borrower to bear the risk of investment, while the bank finances 70% of the value of investment. In practice, it is possible to grant a loan to the client with a lower percentage of its own participation, but the prerequisite for approval of the credit is a completion of minimum 20% and maximum 100% preliminary contracts of sale/renting between the credit user and the buyers or tenants (a typical structure of project financing is shown in Figure 1).

Table 1: Overview of special financing product of commercial banks in Serbia

Bank	Construction credits	Credits for the purchase of land	Credits for the purchase of premises for future upgrading or building a new facility	Issuance of bank guarantees to buyers of apartments under construction	Limit for guarantees to construction companies for apartments under construction for individuals
<i>Banca Intesa</i> a.d. Beograd	+	-	-	-	-
<i>Sberbank</i> a.d. Beograd	+	-	-	-	-
<i>Erste Bank</i> a.d. Novi Sad	+	+	+	+	+
<i>UniCredit Bank</i> a.d. Beograd	+	-	-	-	-

Source: [2], [9], [21], [23]

Figure 1: The typical structure of project financing



Key factors that determine the suitability of the project for project financing

The degree of reliability of the project’s future revenues is the key factor that determines the project suitability for project financing. In the process of project realization, the next phases are important [11]: 1. *Feasibility study* – should include a description of the project (i.e. the summary about the project), the project sponsor information, a report on the valuation of a particular facility/location, technical and legal aspects of the project, market analysis, competitive analysis and projections of future market demand, market environment; investment costs, cash flows and profitability calculations; revenue/expenses and cash flow projections; break-even analysis (break-even point); economic and sensitivity analysis. The purpose of this study is to identify whether the project is commercially acceptable, justifiable as well as to determine whether project financing is the best form of financing. 2. *Project planning* – includes a range of services from initial consultation to the funding organization. Consultation is related to the study with emphasis on the variable components of the project – interest rates, foreign exchange rates, inflation

rates, expected profit of the project. In accordance with the projected project’s costs it is necessary to predict the influence of economic trends to the future cash flows so as to determine the best method of financing. Planning assumes testing of the susceptibility of financial models from the perspective of key business variables in the application of different possible scenarios. 3. *Organization and planning of financing* – focuses on obtaining the primary sources of financing. For this purpose, it is important to prepare the project prospect that will actually present an overview of the essential elements of the project. In order for project sponsors to have sufficient scope and sources of funds, it is necessary to combine loans (bank credits) with equity capital and investments and, through proper allocation of investment and risk, a good financial package could be created. (A) The financing plan takes into account the objectives, such as the availability and accuracy of financial sources; avoidance of expensive sources and maximization of return on equity (ROE); minimizing risk for all parties (risk sharing); optimization of tax aspects (avoiding double taxation); maximization of subsidies (state, the EU). It is obvious that some of the goals are negatively correlated,

so the project's priorities should be defined as a result of collaboration of all partners/participants in the project. (B) The project plan together with the risk analysis and the sensitivity analysis shows the possible shortcomings and difficulties (increased costs, delays due to weather inflows, permits, falling, etc.). The financing plan must earmark funds for such circumstances. Simultaneously, maximization of ROE can be achieved by matching the moment of payment of credit installments with the moment of funds influx, low interest rates and a high coefficient of debt due to existing tax charges (depending on the tax system). Optimization largely depends on the primary valuation method. A common method is the discounted cash flow (DCF). 4. *The supervision over the financing* – is being implemented in three segments: in the phase of construction, in the phase of production start and in operational phase. The purpose of supervision is to embarrass surprises of creditor and those who invested their funds in the project. The supervision is the phase in which control and monitoring are implemented with the aim to avoid obstacles that could threaten the project (primarily involves monitoring of the operational plan works, monitoring of the work progression in relation to operational plans of construction, monitoring of work in relation to an approved building permit and banks reporting on all listed above monitoring and control).

Income, expenses and cash flows forecasts as the main tool for valuation of the efficiency and profitability of investment

Every rational investor expects tangible benefits and increased present value of their investment when makes decision on a new project. The decision to enter into a specific investment project carries an additional business risk, both for the investor and the bank. Therefore, it is important to determine the benefits of certain investments in relation to the risks assumed.

The traditional model of project financing is based on market and financial evaluation of the acceptability of the project. Substrates for evaluation of the acceptability of the project are financial and economic flows, which are formed on the basis of projections of certain items that are taken from the prepared table, such as investment, finance, income statement, and so on [6].

On the basis of formed financial flows the following can be concluded: (1) Total liquidity of the project – is based on the formed financial flow for the period of realization of an investment, for the phase of economic life of a project when the project is able to fulfill financial obligations and for the whole economic life of the project (cumulative). It demonstrates the financial strength of the project or its ability to fulfill financial obligations. (2) Profitability of the project – is assessed based on the (formed) financial flows of the project, which is the economic strength of the project independently of the aspect of the analysis (investor, financier or other). Profitability is assessed on the basis of appropriate indicators of success, such as internal rate of return, net present value, relative net present value and payback period of investment. (3) Sensitivity analysis – besides the efficiency indicators, it is necessary to analyze project sensitivity to changes in certain key parameters. In this way, it perceives the “importance” of the influence of certain parameters on the expected results of the investment, or the possible risks from the expected efficiency investments.

As regards *the conventional models of long-term financing* (long-term investment loans), it is necessary to determine what are additional (incremental) cash flows arising only from the investment that shall be calculated as:

Cash flows from investment – Cash flows without investment

So, if the company wants to calculate net cash flows (from the investment activities), it can be done by the separate calculation of the primary sources that will isolate the effects of the existing business. As regards *project financing*, total cash flows *de facto* are incremental cash flows.

Below we explain the role and importance of projections and forecasts as a significant tool in the analysis. Two important principles of projections are: cash flows and P&L account. Projections of the balance sheet are also used but they are less important [5]. Projections of cash flows (cash flow forecasts) should show: what level of cash will be necessary for the duration of the project, when this need will occur and for how long a certain level of cash must be obtained. Bearing in mind that cash flow forecasts for a longer period of time may have a certain variation

in the real necessary funds, it is important for investors to have the possibility of providing additional funding, either through an additional investment of own funds in the project or through external funding such as bank loans. Net cash flow, after debt servicing, is the result of the projection of cash flows. After debt service, net cash flow represents difference of the total inflows and total outflows of funds from the business operations, investments and financial activities of the company. Cash flows (inflows and outflows) by year projections are derived from the previously projected income statement and projected positions of balance sheet for each year of the projection.

Key categories of position in the cash flow projections in the case of project financing are [8]: (1) incomes: operating and other income; (2) expenses: operating expenses and cost of capital; (3) taxes; (4) debt service: payments of principal and interest; (5) reserves; (6) changes in cash. The choice of a particular indicator of cash flow projections depends on the type of project, period of an analysis (long-term or short-term work) and uniformity of repayment plan (way of repayment). This means that you cannot use all the indicators in an analysis. Assessment of the cost-effectiveness of a project includes answers to the questions in Table 2 [5], which entails the application of appropriate ratio numbers.

PLCR is calculated by the following formula:

$$\text{Net present value of free cash flow (before interest) during the project} / \text{Credit}$$

Free cash flow before interest is reduced by EBITDA (*Earnings before taxes, interest and depreciation – gross earnings before interest, taxes, depreciation and amortization*) for taxes, changes in working capital and investments. It shows how the liquid funds generated in each year of the project are available for servicing financial sources (typically

external financing before its own investments). External interest rate is usually the discount rate. This ratio represents the ratio of the sum of discounted cash flows and debt that will be interested in a certain period of time – in this case, during the entire project. The value of the ratio depends on the risks of specific industries and the phase of the project. In addition, the value amounted to 2 would present the lowest acceptable value.

LLCR is calculated by the following formula:

$$\text{Net present value of free cash flow (before interest) during the term of the loan} / \text{Credit}$$

This ratio is calculated in the same way as the previous one but only for the loan duration. The aspect between the period of the loan and the duration of the project will certainly vary depending on the specific industry. In practice, the loan period is shorter than the duration of the project: usually between 60% and 70% of the total duration of the project. At the same time, this ratio, at the beginning of the repayment period, at the level of 1.5 will be acceptable in most cases.

ICR is calculated by the following formula:

$$\text{EBITDA} / \text{Net Interest}$$

This ratio represents the ratio of EBITDA to net interest, usually for a period of one year. The both ratios below, DSCR and Free Cash Flow / Debt Service represent the relation between profit (EBITDA or free cash flow before interest) for a certain period and the repayment of debt in the same period (a year, 6 months, etc.).

DSCR is calculated by the following formula:

$$\text{Free Cash Flow} / \text{Debt Service},$$

which is calculated by the following formulas:

$$\text{EBITDA} / \text{Debt service or EBIT} / \text{Debt service}$$

Table 2: Basic indicators of the project feasibility

Question	Ratio (Answer)
Will the whole project generate a sufficient cash flow?	PLCR (Project Life Cover Ratio)
Is the repayment of interest provided during the project?	LLCR (Loan Life Cover Ratio)
Is debt service (interest and principal) covered during the project?	ICR (Interest Cover Ratio)
	DSCR (Debt Service Cover Ratio)
	Free Cash Flow / Debt

Source: [14]

DSCR ratio is involved in all analyzes, but it does not take into account the liquidity of some investments during the operational phase. Generally, the ratio of 1.35 is considered to be the least acceptable limit, though lower values come into consideration for the projects that have shorter implementation phase.

Also, in some cases, repayment in equal installments is not possible due to the nature of the project. It is necessary to predict uneven repayment of the loan. It should be noted that, according to internationally agreed criteria (OECD manuals for export credit support), only the companies for insurance of export credits/loans are capable, acceptable, to cover certain maximum deadlines of funding. Financial counselors often advise repayment of the loan in project financing in one installment or more installments at the end of the project. It is the way to preserve a certain percentage of cash flow for certain payments. In reality, large banks would rather avoid such uneven financing due to the possible risks or additional credit insurance requirement.

Positive cash flow occurs when there is an excess of cash (monetary assets) inflows in comparison with outflows (liabilities). The free cash flows arising from the operating income of the project will be used as follows [6]: operational commitments have been made – the rest is EBITDA; investment needs are resolved – the rest is actually free cash flow before interest; hence, debt service (interest and principal) – project is closing. The remaining liquid assets constitute a surplus of free cash.

In order to preserve the liquidity of SPV and minimize risks, the lender will certainly require the following: disposal of surplus for maintenance purpose, which represents a budget for unplanned investments or future costs, shift to a reserve account to pay the debt exploited for an extraordinary debt repayment in advance. Any other funds belong to shareholders, i.e. business owners.

In general, in project financing during the project implementation period the above criteria or indicators are under monitoring [8]: main/vital determinants of the project (e.g. minimum number of base stations of mobile telephony), minimum level of gross profit (EBITDA), minimum level of equity (in absolute value), minimum debt coverage ratio (DSCR) and minimum ratio of interest coverage (ICR).

In addition to these indicators, the banks and financial institutions for project evaluation also use some other indicators, such as NOI (*Net Operating Income*), LTV (*Loan to Value* – an indicator of the loan compared to the value of collateral) and LTC (*Loan to Construction Value* – an indicator of loans in relation to the value of the building under construction). They will not be subject to further analysis.

The example of project financing: The case of construction of residential and commercial premises

On October 31, 2012, Company XYZ development d.o.o. (XYZ) Belgrade addressed to the Orange Bank a.d. Belgrade with the request for financing the project of residential and commercial building in Belgrade at 75 Trgovacka Street, the plot number 975/3 KO Cukarica, floors Po + P + 5 + Pk, 2,608.47 m² gross area (useful area) and 1,742.6 m² for sale. The structure of the proposed loan application is as follows:

1. *Long-term loan (project financing)* for the construction of residential and commercial premises in the amount of EUR 1,300,000.00 (including the amount of capitalized interest) for a period of 21 months including grace period equal to the period of construction of the building, i.e. 15 months.
2. *Overdraft credit* (business account overdraft) for financing value-added tax (VAT) in case of the cost of construction of residential and commercial building 5, in amount of RSD 9 million, for a period of 15 months.

The borrower is a company (SPV) owned by two individuals (Dragan Persovic and Aleksa Petrovic) who are co-owners of the company XYZ that has a long reference in the construction of dwellings (residential) buildings. The company has offered the following collaterals: 1. The mortgage of the first class over the land and building under construction at 75 Trgovacka Street in Belgrade, parcel No. 975/3 KO Cukarica (estimated value of the building in the current phase of construction is EUR 501,000). 2. The hostage of 100% of shares of the borrower (capital worth is EUR 500,000 in RSD). 3. The bills of exchange

and contractual authorization to debit regular RSD (dinar) and foreign currency account of the borrower. 4. The bills of exchange and contractual authorization to debit regular dinar (RSD) and foreign currency accounts of the Guarantor XYZ development d.o.o. Belgrade. The Company has submitted a request with the financial statements for the previous calendar year (established on October 30, 2011; According to the classification of the National Bank of Serbia, SPV is considered and automatically received the Rating B) and the business plan.

The Orange Bank completes loan/credit application, which includes a description of the request and its purpose, the list of transaction and the collateral (all legal issues are resolved), basic information about the company of the Borrower (ownership structure, the project sponsor, reference list), description of the project (planned surface of the floors, structure of flats in the building, projected sales revenues), micro location of the building, the building budget, deadlines for construction (description and analysis of the contractor) and market analysis (macro and micro, including the current offer and existing customers). In terms of the work will be presented the financial part of the project financing. Also, it is necessary to outline that the previous study regarding the development of the residential market in Belgrade was done and that it was noted that there is a significant level of demand for family dwellings in this location, especially for a two and three room apartments.

The planned level of medium quality building construction should contain the following parameters,

starting from the elementary location to the completion of the construction phase to the Main Building Project (see Table 3): the building plot: 587 m², the number of apartments: 22 (the average area of 67 m²), the retail units: 3 (with gallery), the number of parking spaces in the garage: 24, the number of open parking space: 1, gross building area of all floors: 2,608.47 m², net building area of all floors: 2,304.08 m², sales (commercial area) retail units: 260.87 m², and sales (commercial area) apartments: 1,481.8 m².

The total budget of the project amounts to EUR 1.99 million (including financing costs and costs without VAT), out of which the Client's contribution is EUR 692,000 or 35% of total value of the Project and the remain amount is the Bank's loan (see Table 5). At the same time, within the project budget the costs of location are recognized as the market value of the plot in accordance with the valuation of certificated appraiser Invekon gradnja, from August 14, 2012. That price was approved and accepted as the real price of the location by the supervisor SGS Company, although the investor paid EUR 600,000 for relevant location at the end of 2011, with attached evidence. SGS Company, as a supervisor, considers that the investor has subscribed to the location and accepted the valuation report. The investor considers that the location is not considerably overpaid, due to decreasing value of EUR (in comparison with RSD) in the last quarter of 2011. As a result, prices on the real estate market increased and the sales of apartments at a price of EUR 1,300/m² (which is achieved price) and sales of retail unit at the price of 1,800 EUR/m² (which

Table 3: The planned area of retail units (by the floors) and structure of apartments

Planned area by floors			Structure of apartments			
Floor	Net (m ²)	Gross (m ²)	Type of apartment	Number	Average area (m ²)	Total area (m ²)
Basement	367.58	429.76				
Underground Total	367.58	429.76				
Ground floor	215.30	243.17	One-bedroom apartment	4	43.34	173.36
Gallery	71.70	71.70	Two-bedroom apartment	10	60.38	603.84
First floor	275.09	310.74	Three-bedroom apartment	6	82.62	495.72
Second floor	275.09	310.74	Four-bedroom apartment	2	104.42	208.84
Third floor	275.09	310.74	Total	22		1,481.66
Fourth floor	275.09	310.74				
Fifth floor	275.09	310.74				
Sixth floor	275.09	310.74				
Loft Total	1,936.50	2,178.71				
Total	2,304.08	2,608.47				

Source: [14]

is the real market price) achieved a profit of 20%, which represents a good profit margin (see Table 4).

The participation of the investor – The investor has so far invested EUR 769,530.75 in the project for the purpose of: (1) purchase of the land – EUR 600,000, (2) payment of the project documentation design – EUR 29,971.32, (3) compensation for design of construction site – EUR 119,106.89, (4) utility connections (fee for shelters and different fees) – EUR 20,452.54, which is attached as the evidence in the Zero report. Also, the investor will use its funds to pay the cost of fees for the approval of the construction loan.

Due to the decrease of market value of the plot that the investor has bought, the Orange Bank recognized a total initial investment in the amount of EUR 692,000 or 35% of the investment budget. The agreed price of works on the facility in Trgovacka Street in Belgrade is EUR 1,074,000.00 without VAT or EUR 411.69/m² gross (i.e. EUR 1,288,000.00 including VAT), which is in line with the level of costs of the quality of this type of facility. The determined price is based on the prices of materials, labor,

machinery and other elements at the time of bidding. If the price of these elements increased so as to cause an increase in the contract price by more than 10%, the contractor is entitled to demand an increase in the contractual price by the amount exceeding 10%. The condition is that the increases in the price elements did not occur as a result of delay caused by Contractor as well as this increased prices are not a result of applying materials for which Contractor received advance payment. For this reason, the supervisor has foreseen in the budget a reserve in the amount of 6% of the cost of construction, although we note once again that contracted price of EUR 412/m² is above the average market price and in the opinion of the experts of the Orange bank already has a certain reserve.

The deadline of the works is 15 months. The contractor may execute certain works with the subcontractor. In the Building Contract it is referred that the contractor has the right to the Purchaser unless the advance payment requires a dedicated advance. However, as we were informed by the investor there will not be advance payment. In accordance with that situation, the Contractor shall only provide a

Table 4: The projected sales revenues (excluding VAT)

Floor	Area (m ²)	EUR/m ²	Total (EUR)
24 parking places		3,500	84,000
Ground floor	260.8	1,500	391,200
First floor	246.4	1,200	295,700
Second floor	246.4	1,200	295,700
Third floor	246.4	1,200	295,700
Fourth floor	246.4	1,200	295,700
Fifth floor	248.1	1,150	285,300
Loft	248.1	1,150	285,300
Total sale area	1,742.6 (without parking places area)		2,144,500 (without revenues from garage)

Source: [14]

Table 5: The Project budget

Types of costs	Price (EUR) without VAT	% of total costs	Financing by credits (%)	Financing by participation (%)
Location	501,591	25	0	100
Directorate	119,100	6.2	0	100
Technical documentation	30,700	1.6	0	100
Design of the plot	5,000	0.3	100	0
Connectors	84,000	4.4	75	25
Building	1,074,000	56.2	100	0
Supervision	15,300	0.8	90	10
Marketing	17,000	0.9	100	0
Reserves	65,000	3.4	100	0
Interests	60,000	3.4	100	0
Total	1,991,100			

Source: [14]

bank guarantee for good performance in the amount of 10% of the contracted work. If the Contractor does not provide a guarantee for good performance, retention fund will be set up in the amount of 10% of the value of construction work – from any temporary situation 10% will be retained on the restricted deposit account. The payment is made on the basis of temporary situation and ended situation. The price of additional works that the Purchaser specifically requires will be determined by contracting parties in the form of Annex, before the start of work. The guarantee period for works is two years and for equipment is determined by the manufacturer. The Contractor has been engaged at the construction site in Trgovacka Street, which confirms the picture from the construction site. The Orange Bank conducted an analysis of the business contractor MI construction and noted that they cannot menace the implementation of the projects in the agreed terms.

The borrower is required to obtain a use permit no later than March 31, 2014 and to register the facility no later than June 30, 2014. Otherwise, the Bank shall charge fees for non-compliance with the deadlines for the completion of building and disrespect of the deadline of implementation of condominium surveys in the land register in accordance with the Collateral catalogue.

The existing customers: The investor has so far concluded two contracts on the sale of two-bedroom apartments, and the several contracts are in the process of concluding, which will fulfill the commitment of the sale of 30%. In all cases, it comes to cash buyers and the contract price is not lower than EUR 1,200/m².

The profitability of the project: Analysis based on the baseline scenario (see Annex 1): (1) The total sales area (including garages): 2,129 m²; (2) The cost of construction

– construction price EUR 504/m² (the ratio of the cost of construction without VAT and the total sales area).

The Orange Bank considers that the project has a satisfactory profitability (see Table 6), because it is necessary to sell 60% of the surface area intended for sale and 13 apartments of the average area of 67m² in order to the credit back. In other words, the investor can repay the credit by selling smaller apartments (one and two bedrooms) and by selling three-bedroom apartments. The Orange Bank considers that the marketability of garages and retail units is big, given the low planned price of garage and high demand for premises in Zarkovo. Break-even price is 62% lower than the average market price, meaning that in case of market disruption investor can decrease 38% of their prices and provide income to return credit. LTC is calculated based on the cost to the budget, which the supervisor accepted (land value is lower than the price paid for the land). In the pessimistic scenario, the average selling price is lower than the baseline price by 10%, which is quite affordable for the Orange Bank (considering that the average price reduction in Belgrade in the past year was up to 15%, and in Banovo brdo up to 10%. In the coming period a further decrease in prices is not expected, bearing in mind the limited offer of properties on the market and few projects for execution. Consequently, the sale of all apartments, except two apartments on the top floor (an area of over 100m² makes possible to repay credit – see Annex 2).

The Client's scenario is based on an average price of apartments of EUR 1,300/m² and an average price of retail units of EUR 1,800/m². Such expectations are acceptable due to the fact that already in advance client realized price of EUR 1,250/m² for apartments, while the price of retail units on the market is EUR 2000/m². The investor expects

Table 6: The scenario of the Orange bank

Element	Scenario of the Orange bank		Clients' scenario
	(Base)	(Worst)	
LTV	58.33%	65%	54.63%
LTC	65%	65%	65%
Profit margin	10.7%	0.5%	21%
Break-even sales area	1,075 m ² (60% of over ground area)	1,195 m ² (68.5% of over ground area)	952 m ² (54.63% of over ground area)
Break-even sales price	EUR 757/m ²	EUR 754/m ²	EUR 749/m ²
Reserves	38%	31%	45.4%

Source: [14]

that it will be able to repay credit from the sales of the first four floors apartments (their total area is 985.56 m²).

The positive aspects of credit requests for project financing are: good profitability parameters of the investment; significant experience of the investor in the field of construction, real estate market and the use of project financing; consistency of apartment structure with the needs of targeted customers; benefits of the apartments compared to apartments with the same quality in similar locations (lower price compared to the wider part of Vracar and New Belgrade, a higher quality of life compared to Vozdovac). The negative aspects and the main risks regarding the realization of project financing: investor paid location more than its current market value and is able to sell at the greatest possible market price (good thing is that dynamics of sales is defined and the CBRE is engaged as an agent for the sale of apartments and retail units); although the Contractor has extensive experience this is one of the largest investment – the payment will be after the execution of works. The Orange Bank Credit Committee decided to approve the requested loans by XYZ development, recognizing the positive aspects of the submitted credit application. Accordingly, XYZ is contacted to provide the list of necessary documents in order to conclude a credit agreement.

Conclusion

The project proved to be able to operate completely independently of the parent company. Accordingly, 1) the assets of the borrower's is small, usually ownership of the site or facility, but the expected return on using is very high; 2) funding is based on the expectations of future cash flows and cash flows of the project, not on the borrower's current creditworthiness; 3) the SPV is the borrower; 4) all participants who financed the project have the risk of the project realization. The main conclusion is that the feasibility study shows that the project is economically and commercially justifiable.

References

1. Banca Intesa a.d. Beograd. (2011). *Intesa gradnja*. Retrieved from <http://www.bancaintesa.rs/Intesagradnja>
2. Barjaktarović, L. (2008). Projektno finansiranje u Srbiji. *Singidunum revija*, 5(1), 39-48.
3. Barjaktarović, L. (2009). Koncept rezidencijalnog lanca vrednosti. *Bankarstvo*, 01-02 2009, 66-75.
4. Chance, C. (1991). *Project finance 1*. London: IFR Publishing.
5. Cheshire, G. (2008). *Project finance*. Luxembourg: Agence de Transfert de Technologie Financière.
6. Deloitte & Touche Central Europe. (2006). *Finansijska analiza i ocena projekta*. Royal Haskoning: IHS Institute for Housing and Urban Development Studies.
7. Erste Bank a.d. Novi Sad. (2012). *Projektno finansiranje*. Retrieved from <http://www.erstebank.rs/rs/portal/privreda/projektnofinansiranje>
8. Erste Group. (2008). *Group real estate policy – Investment*. Retrieved from <https://www.erstegroup.com/en/Corporates/Large-Corporates/Real-Estate-Services>
9. Erste Group. (2008). *Residential value chain, Concept Serbia*, April 2008.
10. Finnerty, J. (2007). *Project financing: Asset-based financial engineering* (Second edition). New Jersey: John Wiley & Sons Inc.
11. Franolić, M. (2001). *Projektno finansiranje u građevinarstvu*. Zagreb, Hrvatska: Hypo Alpe Adria Bank.
12. Hanić, H., & Pindžo, R. (2008). Some financial aspects of PPP project management. U *Zbornik radova: Internacionalni simpozijum iz projektnog menadžmenta* (str. 65-70), YUPMA, Zlatibor.
13. Hoffman, S. (1989). A practical guide to transactional project finance: Basic concepts, risk identification and contractual considerations. *The Business Lawyer*, 45(1), 181-232.
14. Lončar, D., Barjaktarović, L., & Pindžo, R. (2015). *Analiza isplativosti investicionih projekata*. Beograd: Ekonomski institut.
15. Lončar, D., Rajić, V., & Branković, B. (2011). Project financing in Serbia: Strategies, financial and risk management perspective. In *Proceedings of the international conference: Contemporary Issues in Economics, Business and Management* (pp. 509-519). Ekonomski fakultet u Kragujevcu.
16. Petković, G., & Pindžo, R. (2012). Tourism and new economic challenges. *Ekonomika preduzeća*, 60(1-2), 117-126.
17. Pindžo, R., & Lončar, I. (2013). Quality analysis of hotel services using Servqual methodology. *Ekonomika preduzeća*, 61(1-2), 199-211.
18. Pindžo, R., & Petković, G. (2010). *Risk management in project finance deals*. Faculty of Organizational Sciences, University of Belgrade, International Scientific Conference SYMORG, Beograd.
19. PMI. (2004). *A guide to the project management body of knowledge* (Third edition). Newton Square, PE: Project Management Institute.
20. Rutić, B. (2012). *Razvoj i karakteristike projektnog finansiranja kao savremenog bankarskog proizvoda za privredu* (master rad). Univerzitet Singidunum, Beograd.
21. Sberbank a.d. Beograd. (2015). *Nepokretnosti*. Retrieved from <http://www.sberbank.rs/stanovnistvo/prodaja-stanova-i-nepokretnosti.29.html>
22. Udruženje banaka Srbije. (2007). *Bazel II - Međunarodna saglasnost o merenju kapitala i standardima kapitala*. Beograd: Udruženje banaka Srbije.
23. Unicredit banka a.d. Beograd. (2011). *Finansiranje nekretnina*. Retrieved from <http://www.unicreditbank.rs/finansiranjekretnina>

ANNEX 1 - BASE CASE SCENARIO

Currency:	EUR	VAT	0%	Start of the project	1/ Aug 12	Project period:	21 Month	End of the project	1/ May 14			
Investment costs	NET	%	VAT	GROSS	OBLIGATIONS:	%	Capital:		%			
Land	501.0	25.2%	0%	501.0	Credit 1	1,239.1	90.2%	Land	501.0	72.4%		
Directorate	119.1	6.0%	0%	119.1	Credit interest	60.0	4.4%	Directorate	119.1	17.2%		
Connectors	84.0	4.2%	0%	84.0	Overdraft	75.2	5.5%	Projects	30.0	4.3%		
Projects	30.7	1.5%	0%	30.7	Credit 4	0.0		Connectors	20.5	3.0%		
Supervision	15.3	0.8%	0%	15.3	Interest costs	0.0	0.0%	Bank fees	20.0	2.9%		
Building	1,074.0	53.9%	7%	1,149.2	Bank costs	0.0	0.0%	Supervision	1.5	0.2%		
Reserves	65.0	3.3%	0%	65.0	Early repayment	0.0	0.0%	Other 4	0.0	0.0%		
Marketing	17.0	0.9%	0%	17.0	Other debts 1	0.0	0.0%	Other 5	0.0	0.0%		
Design of the plot	5.0	0.3%	0%	5.0	Other debts 2	0.0	0.0%	Other 6	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 3	0.0	0.0%	Other 7	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 4	0.0	0.0%	Other 8	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 5	0.0	0.0%	Capital 9	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 6	0.0	0.0%	Capital 10	0.0	0.0%		
Bank charges	20.0	1.0%	0%	20.0	Total net liabilities	1,374.3	100.0%	Capital 11	0.0	0.0%		
Credit's interest	60.0	3.0%	0%	60.0	VAT credit	0.0	0.0%	Capital 12	0.0	0.0%		
Total costs of investment	1,991.1	100.0%	3.8%	2,066.3	Total gross liabilities	1,374.3	100.0%	Total (capital)	692.0	100.0%		
Calculation of sale	WITHOUT VAT (NET)				VAT		WITH COSTS (GROSS)					
Class	PLANNED			REAL			PLANNED		REAL			
	unit	m ²	Price/m ² /unit	Income	Status	Income	Price/m ² /unit	Income	Price/m ² /unit	Income		
			EUR	(000)	of sale	(000)	EUR	(000)	EUR	(000)		
Retail (GF)	3	260.8	1,500.0	391.2	100.0%	391.2	18.0%	1,770.0	461.6	1.8	461.6	1,500.00
Apartments (I floor)	4	246.4	1,200.0	295.7	100.0%	295.7	8.0%	1,296.0	319.3	1.3	319.3	1,200.00
Apartments (II floor)	4	246.4	1,200.0	295.7	100.0%	295.7	8.0%	1,296.0	319.3	1.3	319.3	1,200.00
Apartments (III floor)	4	246.4	1,200.0	295.7	100.0%	295.7	8.0%	1,296.0	319.3	1.3	319.3	1,200.00
Apartments (IV floor)	4	246.4	1,200.0	295.7	100.0%	295.7	8.0%	1,296.0	319.3	1.3	319.3	1,200.00
Apartments (V floor)	3	248.1	1,150.0	285.3	100.0%	285.3	8.0%	1,242.0	308.1	1.2	308.1	1,150.00
Apartments (Loft)	3	248.1	1,150.0	285.3	100.0%	285.3	8.0%	1,242.0	308.1	1.2	308.1	1,150.00
Total / average	25	1,742.6	1,230.7	2,144.5	85.8%	2,144.5	9.8%	1,351.6	2,355.2	1,575.9	2,355.2	1228.6
Number of parking spaces	24	386.9	3,500.0	84.0	100.0%	84.0	18.0%	3,500.0	99.1	3,500.0	99.1	
Total sales revenue		2,129		2,228.5		2,228.5			2,454.3		2,454.3	

TOTAL TURNOVER	2,228.5	VAT	2,454.3
Total sales revenues	2,228.5	10.1%	2,454.3
Residential/commercial property	2,144.5	9.8%	2,355.2
Parking spaces	84.0	18.0%	99.1
Other revenue	0.0	0.0%	0.0
Total costs of investment	-1,991.1	3.8%	-2,066.3
PROFIT MARGIN I	237.4		388.0
Other costs 1	0.0	0.0%	0.0
Other costs 2	0.0	0.0%	0.0
Other costs 3	0.0	0.0%	0.0
PROFIT MARGIN II	237.4		388.0
PROFIT MARGIN II (%)	10.7%		15.8%
Interest costs / Bank costs	0.0	0.0%	0.0
Interest income	0.0	0.0%	0.0
Net interest	0.0		0.0
CAPITAL:	31.0%		
RESERVES:	38.3%		
GROSS BREAK-EVEN PRICE/ m ²	757.7	GROSS BREAK-EVEN AREA	1,075

ANNEX 2. WORST CASE SCENARIO

Currency:	EUR	VAT:	0%	Start of the project	1/ Aug 12	Project period	21 Month	End of the project	1/ May 14			
Investment costs	NET	%	VAT	GROSS	OBLIGATIONS:	%	Capital:		%			
Land	420.0	22.0%	0%	420.0	Credit 1	1,239.1	90.2%	Land	420.0	68.7%		
Directorate	119.1	6.2%	0%	119.1	Credit interest	60.0	4.4%	Directorate	119.1	19.5%		
Connectors	84.0	4.4%	0%	84.0	Overdraft	75.2	5.5%	Projects	30.0	4.9%		
Projects	30.7	1.6%	0%	30.7	Credit 4	0.0		Connectors	20.5	3.3%		
Supervision	15.3	0.8%	0%	15.3	Interest costs	0.0	0.0%	Bank fees	20.0	3.3%		
Building	1,074.0	56.2%	7%	1,149.2	Bank costs	0.0	0.0%	Supervision	1.5	0.2%		
Reserves	65.0	3.4%	0%	65.0	Early repayment	0.0	0.0%	Other 4	0.0	0.0%		
Marketing	17.0	0.9%	0%	17.0	Other debts 1	0.0	0.0%	Other 5	0.0	0.0%		
Design of the plot	5.0	0.3%	0%	5.0	Other debts 2	0.0	0.0%	Other 6	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 3	0.0	0.0%	Other 7	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 4	0.0	0.0%	Other 8	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 5	0.0	0.0%	Capital 9	0.0	0.0%		
	0.0	0.0%	0%	0.0	Other debts 6	0.0	0.0%	Capital 10	0.0	0.0%		
Bank costs	20.0	1.0%	0%	20.0	Total net liabilities	1,374.3	100.0%	Capital 11	0.0	0.0%		
Credit interest	60.0	3.1%	0%	60.0	VAT credit	0.0	0.0%	Capital 12	0.0	0.0%		
Total costs of investment	1,910.1	100.0%	3.9%	1,985.3	Total gross liabilities	1,374.3	100.0%	Total (capital)	611.0	100.0%		
Calculation of sale	WITHOUT VAT (NET)				VAT		WITH COSTS (GROSS)					
Class	PLANNED			REAL			PLANNED		REAL			
	unit	m2	Price/m²/unit	Income	Status	Income	Price/m²/unit	Income	Price/m²/unit	Income		
			EUR	(000)	of sale	(000)	EUR	(000)	EUR	(000)		
Retail (GF)	3	260.8	1,300.0	339.0	100.0%	339.0	18.0%	1,534.0	400.1	1.5	400.1	1,300.00
Apartments (I floor)	4	246.4	1,100.0	271.0	100.0%	271.0	8.0%	1,188.0	292.7	1.2	292.7	1,100.00
Apartments (II floor)	4	246.4	1,100.0	271.0	100.0%	271.0	8.0%	1,188.0	292.7	1.2	292.7	1,100.00
Apartments (III floor)	4	246.4	1,100.0	271.0	100.0%	271.0	8.0%	1,188.0	292.7	1.2	292.7	1,100.00
Apartments (IV floor)	4	246.4	1,100.0	271.0	100.0%	271.0	8.0%	1,188.0	292.7	1.2	292.7	1,100.00
Apartments (V floor)	3	248.1	1,000.0	248.1	100.0%	248.1	8.0%	1,080.0	267.9	1.1	267.9	1,000.00
Apartments (Garret)	3	248.1	1,000.0	248.1	100.0%	248.1	8.0%	1,080.0	267.9	1.1	267.9	1,000.00
Total/average	25	1,742.6	1,101.5	1,919.4	85.8%	1,919.4	9.8%	1,209.0	2,106.8	1,409.7	2,106.8	1100.0
Number of parking spaces	24	386.9	3,500.0	84.0	100.0%	84.0	18.0%	3,500.0	99.1	3,500.0	99.1	
Total sales revenue		2,129		2,003.4		2,003.4			2,205.9		2,205.9	

TOTAL TURNOVER	2,003.4	VAT	2,205.9
Total sales revenue	2,003.4	10.1%	2,205.9
Residential/commercial property	1,919.4	9.8%	2,106.8
Parking spaces	84.0	18.0%	99.1
Other revenue	0.0	0.0%	0.0
Total costs of investment	-1,910.1	3.9%	-1,985.3
PROFIT MARGIN I	93.2		220.6
Other debts 1	0.0	0.0%	0.0
Other debts 2	0.0	0.0%	0.0
Other debts 3	0.0	0.0%	0.0
PROFIT MARGIN II	93.2		220.6
PROFIT MARGIN II (%)	4.7%		10.0%
Interest costs / Bank costs	0.0	0.0%	0.0
Interest income	0.0	0.0%	0.0
Net interest	0.0		0.0
CAPITAL:	28.1%		
RESERVES:	31.4%		
GROSS BREAK-EVEN PRICE / m²	754.6	GROSS BREAK-EVEN AREA	1,195



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