# Participation of financial institutions in project financing of infrastructure projects\*

UDK 005.8:336.581

Slađana Benković, University of Belgrade, Faculty of Organizational Sciences Slađana Barjaktarović Rakočević, University of Belgrade, Faculty of Organizational Sciences Aleksandar Zeremski, Economics Institute, Belgrade

**Summary:** Infrastructure investing makes up a significant part of the financial institutions portfolio, and contributes to creating long-term assets cash flows. In addition, infrastructure assets are relatively inelastic in demand and price, and as such the asset has a good performance during the economic downturn. Properly structured infrastructure investments contribute to the diversification of the portfolio, due to the lack of correlation with the yield on bonds, stocks and real estate, and offer good protection against inflation. Applying the concept of project financing involves the application of the most advanced financial techniques and products that are able to ensure only credible international financial institutions and companies. Paper attempts to indicate the presence of financial institutions in project financing of infrastructure, as well as the benefits of this concept in expected to finance infrastructure in Serbia.

**Key words:** Project financing, Financial institutions, Infrastructure projects

Rezime: Investiranje u infrastrukturu čini značajan deo portfolia finansijskih institucija, te doprinosi stvaranju dugoročne aktive i izvesnih novčanih tokova. Dodatno, aktiva infrastrukture je relativno neelastična na tražnju i cene, te kao takva, aktiva ima dobre performanse i u vreme pada ekonomske aktivnosti. Valjano strukturirane infrastrukturne investicije doprinose diverzifikaciji portfolija, usled slabe korelacije sa prinosom na obveznice, akcije i nekretnine, te nude i dobru zaštitu od inflacije. Primena koncepta projektnog finansiranja podrazumeva primenu najrazvijenijih finansijskih tehnika i proizvoda koje su u stanju da obezbede samo međunarodno kredibilne finansijske institucije i kompanije. Radom se želi ukazati na prisutnost finansijskih institucija u projektnom finansiranju infrastrukture, kao i na koristi koje se od ovog koncepta finansiranja infrastrukture očekuju u Srbiji.

Ključne reči: Projektno finansiranje, finansijske institucije, infrastrukturni projekti

© 2012 Published by Economics Institute

\* This Paper is published within the research on the Project 179001 funded by the Ministry of Education and Science of the Republic of Serbia

# 1. INTRODUCTION

Project financing of infrastructure refers to any financing of infrastructure in which investors rely on cash flow and revenues of the project, which are meant to achieve a return on the invested funds. The investors can be individuals and institutions, as well as numerous international credit organizations. The motives of the investors are very different, thus they can range from adequate interest on approved loans to broader national and development objectives. The financial structure of project financed infrastructure projects is quite complex and involves contractual arrangements between numerous stakeholders: the public sector (Government and Local Government), project sponsors, project managers, suppliers, subcontractors, numerous third parties and finally, the users of the infrastructure project.

A project company established with an aim of realizing an infrastructural project does not have the capacity to finance the infrastructure project on its own, therefore it involves other sources of financing as well. An investor syndicate is formed due to this, which results in the internationalization of projects since investors come from different countries, and even different continents. Seeing as how project financing is a highly specialized field of finance, the assumption is that the investors are sufficiently skilled in assessing the risks that accompany an investment into an infrastructure project.

This is why an adequate choice and participation of certain financial institutions in the construction of infrastructure projects is extremely important, seeing as how it provides certainty of an influx of financial resources that are necessary for the realization of the project, temporal accuracy of the set deadlines for completion of the project, dispersion and reduction of risk, and finally, satisfactory technical and economic characteristics of the infrastructure project, because all of the given elements are a prerequisite for later billing for the use of services of the given object, as a basis for the return on invested funds.

# 2. PROJECT FINANCING OF INFRASTRUCTURE PROJECTS

Project financing is a mode of financing that has particularly gained on importance and attractiveness during the last few decades, due to the size and complexity of the projects financed in such a manner throughout the world, and in various branches of industry. This concept of infrastructure financing has long been in use in developed countries, because it allows for the maximization of results on the basis of invested funds. Through application of this financing concept, the investor has insight into the project's cash flows (inflows and

outflows), while the "assets of the project are the only guarantee for the realization of the project" (see /3/).

In developing countries, this method of financing projects is present, but it is expected that it has yet to gain on importance due to the limited financial resources that these countries are facing, as well as the growing demand for higher quality and more functional infrastructure. Global economic growth and development, technological advances, climate changes, urbanization, increasing traffic congestion, pollution, overpopulation, etc., are factors of change that will in the future further increase the need for investing into infrastructure. This is particularly contributed to by the challenges that infrastructure investors are facing, seeing as how certain parts of infrastructure systems become obsolete in a short period of time, the funds intended for public financing are becoming increasingly limited, while the financing of infrastructure projects is becoming increasingly complex (see /14/). At the same time, the economic crisis and limited budgetary resources impose the need for finding new sources of financing for infrastructure projects.

That is the reason why governments around the world are showing readiness to involve financial institutions in the financing of infrastructure projects, as well as the provision of services in activities that include the fields of energy, transport, irrigation and reclamation, telecommunications, oil and gas, mining, schools and hospitals. This method of securing financial resources has allowed for improvement of the activities and services of the public sector, without which it is difficult to ensure the quality of life and business activities. Such a stimulus (see Table 1) is a result of the need for additional financing, as well as cutting down the time necessary for project realization, efficient use of the invested funds, better management and technical skills, as well as the introduction of competition elements into monopolistic structures.

Table 1. - Total loan investments per sector in 2010.

rabio ii rotarioan invocamente per eceter in 2010i		
Sector	Amount (US \$ millions)	
Energy	73300,4	
Transport	52315,4	
Oil and gas	25950,8	
Entertainment and ownership	13824,2	
Telecommunications	13382,7	
Petrochemistry	11306,4	
Mining	8857,7	
Industry	6306,0	
Water and sewage	1577,5	
Waste and recycling	1266,6	
Agriculture and forestry	86,3	
Total	208173,9	

Source: (see /15/, page 56)

Project financing represents a manner of financing infrastructural and industrial projects in the fields of transport (toll roads, toll bridges and railways), energy (private power plants, facilities for recycling energy and gas lines), water supply and sewerage networks; health care (construction and operation of new hospital buildings and facilities for medical waste disposal), education (provision of student accommodations and facilities for universities, faculties and schools), and state offices security.

# 3. THE ROLE OF FINANCIAL INSTITUTIONS IN PROJECT FINANCING OF INFRASTRUCTURE PROJECTS

In the realization of infrastructure projects through application of the project financing concept, various financial sources are used. A project company may obtain these financial sources on the domestic, as well as international financial market. Accordingly, from the aspect of a state investing into infrastructure, a financial market can be characterized as internal or external (see /6/). An internal market is also called a national market. At the same time, financial institutions that are emerging as investors into infrastructure projects are classified into two broad categories, as domestic and international investors (see /12/).

## 3.1 Domestic financial institutions

#### **Depository institutions**

The role of domestic commercial banks in project financing is extremely important, especially when it comes to financing local components of projects and working capital. They also often associate with foreign commercial banks into a consortium, which financially supports the realization of the project. Bank loans for large projects are usually arranged as consortium loans, or syndicated loans. With consortium loans, several banks provide loan funds on the basis of a special credit arrangement, each from its own source and in a fixed amount, with identical conditions under which individual loans are approved. This means that more than one bank acts as the lead manager, thus accordingly they share responsibility for various aspects of the transaction, which allows them to use this mode of financing infrastructure more efficiently.

- The division of responsibilities among banks is performed in accordance with the following activities (see /12/):
- Preparation of documentation, in cooperation with the banks' lawyers. All the banks emerging as the lead managers have great interest in participating during this phase,
- Engineering, in cooperation with the creditor's engineer.

- Financial modeling,
- Insurance, in cooperation with an insurance advisor,
- Assessment of the market or the income from operations, in cooperation with the bank's market advisor or income advisor,
- Preparation of an information memorandum,
- Syndicalization.

Cooperation between banks on these activities involves different forms and various perceptions of prestige, due to the performance of certain tasks on the project. Substantial resources in multiple currencies can be mobilized in such a manner, thus a "critical" mass of financial resources can be obtained, which is necessary for successful realization of the project. Loans of such a profile require good preparation and do not come at a small price, while the obligations are susceptible to oscillations on the basis of fluctuating interest rates.

#### Institutional investors

Institutional creditors include life insurance companies, pension and investment funds, and charitable foundations. Institutional debt markets traditionally provide an important source of long-term funding with a fixed interest rate. Such institutions are able to invest a limited amount of funds into projects that are of importance for the development and improvement of infrastructure quality of the broader social community. Life insurance companies, which are subject to the legislation on insurance companies, often limit their foreign loans to 5% of their total assets.

Innovative methods of financing in this field are particularly important to institutional investors, because they represent a relatively new and promising source of fresh capital for financing infrastructure projects. They are attracted to stable and long-term incomes that are generated by certain types of infrastructure projects. Therefore, an increasing number of pension funds are withdrawing from the volatile stock market, and are investing more into safer infrastructure projects. One of the reasons for such a strategy is the fact that, in such a manner, pension funds diversify their portfolios, and thus reduce risk.

Pension fund portfolio managers see the place of infrastructure investments somewhere in between stocks and bonds, because they have a certain growth potential and carry a good current yield. Another important fact that certainly supports the expectation for an increasing role of institutional investors in the financing of infrastructure projects is the fact that, during the period from 1994 to 2007, infrastructure generated an average annual rate of return of 7.81%, compared to 4.04% on bonds and 6.64% on stocks (see /2/).

#### Investment management companies and venture capital providers

Investment management companies borrow money as risk capital when they are able to offer participation in equity through warrants, equity rights, conversions or similar rights. Some companies are owned by banks or insurance companies. They usually limit their investments to around \$ 5 million. They have remained

independent, while in certain situations they can even undertake some risky capital investments in an amount of more than \$ 5 million.

Entrepreneurial funds or *Venture capital funds* represent a pool of funds from an investor, who is seeking to secure funds for the realization of infrastructure projects, through an increase in productivity and creativity (see /11/). If one assumes that a project company with poor access to capital is attempting to open a new market or access an old market with a better product, in such cases it may not be able to obtain loans, either because of a lack of credibility, or the fact that it is already considerably in debt. It may have even exhausted the finances of family and friends. Entrepreneurial funds enable such a company to start and build up its business, by providing the necessary financial resources. Ordinarily, a supplier of funds for business ventures takes shares in a company in exchange for money. These funds are able to provide the necessary expertise in the start up of a business, and help the entrepreneur become successful. Entrepreneurial funds are considered high risk investments, but they have a potential for high returns.

By issuing bonds on the capital market, funds can be mobilized for a period longer than 10 years, with a fixed interest rate and relatively low costs of emission. However, bonds can only be issued by project sponsors or shareholders of a project company that have an adequate rating (AAA or Aaa, according to Standard & Poor's and Moody's) and creditworthiness. During a longer period of time, a limited use of debt funds was applied by project companies or countries for the financing of infrastructure projects. However, in recent years (Table 2 and Table 3) the use of the bond market as a mechanism for obtaining debt funds has increased significantly.

Table 2. - Funds raised through bond issues per country

Country	Amount (US \$ millions)
USA	4905
Australia	4550
Canada	4521
UK	3276
Indonesia	698
Macau	600
Dominican Republic	284
Thailand	274
Italy	260
Philippines	160
Peru	112
India	110
New Zealand	40
Total	19 790

Source: (see /15/, page 75)

Table 3. - Funds raised through bond issues per sector

rabic or rained and ough bond for cooler		
Sector	Amount (US \$ millions)	
Infrastructure	7665	
Energy	4877	
Oil and gas	2474	
Social infrastructure	2174	
Mining	2000	
Entertainment	600	

Source: (see /15/, page 75)

The need for financing infrastructure has particularly become expressed in the wake of the global economic crisis. Preliminary estimates indicate that the development of infrastructure in the EU until the year 2020 will require between 1500 and 2000 billion euro. It is expected that the securement of financial resources through project bond issue will allow for the construction of a trans-European transportation network, the reconstruction and construction of the energy sector, as well as the sector of information and communication technologies (see /4/). The backbone of this financing model is the project bond. Project bonds are a type of bonds that are issued in order to finance particular investment projects, and which are insured either by the income from the project or the municipal institution that is managing the project. The most common issuers of such bonds are airports, ports, hospitals, roads on which tolls are charged since they are project funded, while this type of funding aims to animate and involve the private sector in the financing of infrastructure development in the countries of the EU.

#### 3.2 International financial institutions

#### 3.2.1 The World Bank and development banks

The World Bank is not a bank in the general sense. It could rather be said that the World Bank is a synonym for two development institutions that are owned by 187 countries, the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). Both institutions have a different but supportive role in the mission of reducing global poverty and improving the standard of living. The IBRD focuses on countries with a medium average per capita income and creditworthy poor countries, while the IDA focuses on the poorest countries of the world. These two organizations together provide low-interest loans, interest-free loans and subsidies to developing countries for education, health, infrastructure, communications, and many other purposes.

During the fiscal year of 2010, the World Bank had committed \$ 72.9 billion into credits, loans, grants and guarantees. Out of the total, the largest percentage

went to Latin America and the Caribbean (24%), while Europe and Central Asia received 18% of the total loans. The following table shows IBRD and IDA lending by region.

Table 4. - IBRD and IDA lending by region

Northern Asia	19%
Middle East and Northern Africa	6%
Latin America and the Caribbean	24%
Africa	20%
Eastern Asia and the Pacific	13%
Europe and Central Asia	18%

Source: (see /17/)

Out of the total value of loans of the IBRD and IDA, the highest percentage (18%) was invested into public administration and the legal and judicial sector. It is followed by the energy and mining sector with 17%, and the sectors of finance and transport with 16% and 15%, respectively. The lowest percentage was received by the sector of information and communication, receiving less than 1%. The situation is similar with the industry and trade sector which received 2%, as shown in Table 5.

Table 5. - IDA and IBRD loans by sector

Table 3 IDA and IBND loans by Sector		
Transport	15%	
Water, sanitation and flood protection	7%	
Agriculture, forestry and fishing	5%	
Education	8%	
Energy and mining	17%	
Finance	16%	
Health care and other social services	12%	
Industry and trade	2%	
Information and communication	< 1%	
Public administration, legal and judiciary	18%	

Source: (see /17/, page 6)

# International Bank for Reconstruction and Development (IBRD)

The International Bank for Reconstruction and Development is an international development finance institution, established for the purpose of securing international monetary and financial cooperation, related to the crediting of medium-term and long-term projects. The International Bank for Reconstruction and Development is primarily interested in projects that are important for the national economy of a member state, which are not necessarily profitable, as is the usual case when it comes to infrastructure projects. The realization of such projects passes through several phases, such as: identification, preparation,

assessment, negotiations, adoption, implementation and monitoring, and subsequent project evaluation.

Project assessment is performed in order to identify the projects that should be supported, due to their contributions to the development of a national economy, as well as their technical and economic characteristics. Projects are proposed by member states, as well as other interested borrowers. This is followed by the project preparation phase in which the borrower and the International Bank for Reconstruction and Development mutually consider the most favorable form of financing for the project, as well as the project's impact on the development of the local community. Afterwards, project evaluation allows for consideration of the technical, institutional, economic and financial aspects of the project. It is determined whether the project is reliable in the technical sense, whether certain standards are respected, as well as whether the planned location, technology and equipment meet the needs of the project.

Countries that borrow from the International Bank for Reconstruction and Development have a longer repayment period than they would if they were to borrow from commercial banks (15 to 20 years, with a grace period of 3 to 5 years). Credit expansion is an important component of financial solutions of the International Bank for Reconstruction and Development. This Bank has a comparative advantage in mitigating political risks, especially regulatory and contractual risks, thanks to its long-term relationships with the countries, as well as the support policy that it provides to their governments. Guarantees from the International Bank for Reconstruction and Development act as catalytic agents for increasing the confidence of the private sector, and stimulate investments within member countries by supplementing other sources of financing and risk management tools offered by the bank. A World Bank guarantee is viewed by investors as a stability factor in transactions with sovereign governments.

World Bank Guarantees have helped many public and local governments secure attractive direct investments from the private sector, into projects related to oil, gas and mining, energy, telecommunications, transport and water. In addition, participation of the private sector in privatizations and public-private partnerships has also been improved, as well as the access to international capital markets under more favorable conditions. In addition to the leverage effect, the guarantees have also played an important role in easing the entrance of new economies onto the international capital market, by helping them gain credibility. Guarantees of the International Bank for Reconstruction and Development are available to all countries that are eligible to borrow from the International Bank for Reconstruction and Development. In 2010, the International Bank for Reconstruction and Development committed \$ 58.75 billion into infrastructure development in 46 countries worldwide (see /22/).

# International Development Association (IDA)

The World Bank also possesses guarantee instruments for members of the International Development Association (IDA). Particularly important are partial risk guarantees, partial credit guarantees and policy based guarantees. The International Development Association approves loans to the least developed

countries, because loans from the International Bank for Reconstruction and Development have been extremely expensive for underdeveloped countries. The International Development Association provides funding for infrastructure projects through very favorable loans, with repayment periods ranging up to 40 years. Members of the International Development Association can be countries that are members of the International Bank for Reconstruction and Development. The International Development Association is a legally and financially separate association from the International Bank for Reconstruction and Development, but their officials and management are the same.

Contributions received by the International Development Association enable the World Bank to approve between 6 and 7 billion dollars of interest-free loans per year to 78 of the poorest countries of the world, which have a population of 2.5 billion people. Such assistance is of vital importance since these countries have little or no opportunities for borrowing under market conditions (The World Bank provides them with loans and credits that are returned without interest, with a repayment period of 35 to 40 years and a 10 year grace period). The International Development Association assists in providing better basic life services (such as education, health care, clean water and sanitary protection), and supports reforms and investments aimed at increasing productivity and employment.

Almost all of the loans of the International Development Association are interest free, but they include a small service fee, which currently stands at 0.75%. The International Development Association among other things also provides grants, which are awarded to countries that carry a high risk of non-payment of the debt. In 2010, the obligations of the International Development Association amounted to 14.5 billion dollars, of which 18% was given under subsidized conditions. The new commitments within this fiscal year consist of 190 new operations. Since 1960, the International Development Association has provided 222 billion dollars to 108 countries. Its annual commitments are steadily increasing and have on average amounted to around 13 billion dollars over the past three years (see /23/). The operations financed by the International Development Association include basic education, primary health services, clean water and sanitation. environmental protection, improvement of the business climate, infrastructure and institutional reforms. Such projects have paved the way for economic growth, the creation of new jobs, higher incomes, and better living conditions. The biggest beneficiaries of the International Development Association have so far been the poorest countries of Africa south of the Sahara, as well as the countries of South Asia.

#### **International Finance Corporation (IFC)**

The International Finance Corporation is a subsidiary of the World Bank, which has specialized in the private sector. The main goal of this corporation is to improve economic development through the private sector. The International Finance Corporation invests into projects in regions and areas in which private investors are not engaged in great numbers, and finds new ways of creating opportunities on markets that are considered too risky for commercial investment without the participation of this corporation. The International

Finance Corporation is the largest source of equity and debt capital for private sector project financing in developing countries.

The International Finance Corporation does not directly approve loans to micro, small and medium enterprises and entrepreneurs, but many of the clients are financial intermediaries that lend to smaller companies. It offers a limited amount of subsidized funds in fields such as biodiversity, sustainable energy and corporate responsibility. The eligibility of a project funded by the International Finance Corporation implies that the project: is realized in developing countries that are members of the International Finance Corporation, belongs to the private sector, has a technical character, has good chances of being profitable, benefits the local economy, and meets the environmental and social standards of the International Finance Corporation as well as the standards of the host country (see /19/).

Investments of the International Finance Corporation range between 1 and 100 million dollars, with a limited number of investments. In order to ensure the participation of investors and creditors from the private sector, the International Finance Corporation mostly finances less than 25% of the total assessed value of the project.

# **Multilateral Investment Guarantee Agency (MIGA)**

The Multilateral Investment Guarantee Agency (MIGA) does not grant loans. Instead, it issues guarantees and encourages an inflow of private capital into developing countries by providing investors with information on investment opportunities in developing countries, as well as providing technical assistance. The Multilateral Investment Guarantee Agency approves guarantees for long term investments and loans, but not for export credits that have already been insured by national agencies. The minimal amount of insurance by the Multilateral Investment Guarantee Agency for guaranteeing investments by project has not been determined, while the maximum limit of insurance is 200 million dollars. The amount of insurance coverage can be increased through syndicated insurance. The Multilateral Investment Guarantee Agency guarantees for investments that it deems healthy and in accordance with the development objectives of a host country.

Projects and guarantees supported by the Multilateral Investment Guarantee Agency have multiple benefits: the creation of new jobs, tax revenues, and a transfer of knowledge and technologies. Local communities often gain significant secondary benefits through an improved infrastructure, including roads, electrical networks, hospitals, schools and water facilities. Foreign direct investments supported by the Multilateral Investment Guarantee Agency also encourage similar local investments, and stimulate the development of local companies that provide related goods and services. As a result, developing countries have greater chances of breaking the vicious circle of poverty.

The Multilateral Investment Guarantee Agency is constantly evolving and finding new resources and technologies that help spread information on investment opportunities. Thousands of users are taking advantage of a whole range of services that provide on-line information on the investments of the Multilateral

Investment Guarantee Agency, which are complemented by field work. This agency uses its legal services to further smooth out any possible interference during the course of an investment. Through its program of mediation in disputes, the Multilateral Investment Guarantee Agency helps governments and investors eliminate their differences, with an ultimate goal of improving the investment climate of every country.

# 3.2.2 Regional development banks

In addition to the World Bank, a particular role in the realization of infrastructure projects through the concept of project financing is played by multilateral financial agencies, which are more geographically (continentally) limited than the World Bank. The following should be mentioned:

- The European Investment Bank EIB
- The European Bank for Reconstruction and Development EBRD
- > The Council of Europe Development Bank CEB
- The African Development Bank AfDB
- ➤ The Islamic Development Bank IDB
- > The Asian Development Bank ADB
- > The Inter-American Development Bank IDB
- The German Development Bank (Kreditanstalt fur Wiederaufbau KfW)

#### **European Investment Bank (EIB)**

The European Investment Bank approves individual loans to entities from the private and public sectors, as well as banks. Loans for infrastructure projects are approved for a period of 20 years, however, it is possible to negotiate and arrange a longer repayment period. Repayment is usually performed in annual or semiannual installments, while the grace period covers the period of construction of the infrastructure project. The European Investment Bank devotes great attention to the assessment of projects that are proposed for funding, whose eligibility is assessed in accordance with the economic, financial and technical characteristics of a project, as well as its contribution to the set goals of the European Union.

The European Investment Bank finances a wide range of projects in all sectors of the economy. The projects must adhere to at least one of the crediting objectives of the European Investment Bank. As a rule, the bank approves loans of up to 50% of the investment value of a project. The European Investment Bank has two main methods of financing, and these are individual and indirect loans. Individual loans are granted for viable and promising projects and programs that cost over 25 million euro, which are in accordance with the crediting objectives of the European Investment Bank. Indirect loans are essentially credit lines for banks and financial institutions, which are meant to

assist them in providing finances for small and medium enterprises with investment programs or projects that cost less than 25 million euro. The European Investment Bank also provides microfinancing in certain countries. In 2010, the European Investment Bank was present on the Serbian market as well, which is supported by the fact that the investment value of approved investments amounted to 690.2 million euro. The allocation of the funds is shown in Table 6.

Table 6. - Allocated funds by the EIB during the year 2010

€ Millions

		Millions
PE Electric Power Industry of Serbia	Replacement of electromechanical components, digitally integrated into remote readout and connection / disconnection of the system	40.0
PE Roads of Serbia	Construction of 47 km of ring roads, of which 27 km is on the pan-European Corridor X, in the western and southern part of Belgrade	40.0
The Republic of Serbia	Highway construction on a section of the pan-European Corridor X in Serbia	195.0
The City of Belgrade	Construction of a new bridge on the river Sava, and access infrastructure into Belgrade	90.0
The Republic of Serbia	Investments aimed at revitalization of the public sector, research and development	200.0
European Fund for Southeast Europe SA, SICAV-SIF	Investing into agreed upon A tranches of the regional A&B sub-fund	10.2
The Republic of Serbia	Support of the program for improving the equipment and quality of primary and secondary education	50.0
Sogelease Serbia LLC Belgrade	Financial support for the development of small and medium enterprises	20.0
KBC Bank Belgrade	Financial support for the development of small and medium enterprises	20.0
Erste Bank Novi Sad	Financial support for the development of small and medium enterprises	25.9

Source: (see /5/, page 36)

The European Investment Bank also supports a part of the policy that the European Union member states have initiated, regarding the concept of public-private partnerships in the financing of public infrastructure projects that are also financed by private capital. This concept of infrastructure financing, adopted by the majority of Governments of the European Union, enables the private sector

to perform investments through an independent organizational unit, and provide services to public sector clients through independent business activities (funded and managed by the private sector) in exchange for financial compensation, which is associated with the level of the service provided.

The key advantages of this infrastructure financing concept are reflected in the following (see /20/):

- Infrastructure built through a public-private partnership can improve the
  quality and quantity of basic infrastructure such as water, energy,
  telecommunications and transport, and can be widely applied to other
  public services such as hospitals, schools and prisons. This means that
  the public has access to improved services at the precise moment when
  the need for them arises, and not at the moment when it is allowed by
  the government's spending program (available budget resources).
- 2. The value for money ratio of a project funded through a public-private partnership achieves higher quality in comparison to projects that are solely financed from budget resources. A public-private partnership focuses on the process of cash inflow and outflow throughout the entire lifetime of the project, and not only on the initial construction costs. This concept identifies long-term costs, and evaluates the suitability of the project.
- 3. The performance risk of the funds is transferred onto the private sector. The private sector realizes its investment only if the project company fulfills its obligations in accordance with their Contract. Since the private sector usually does not receive any compensation until the object is available for use, the structure of financing through a public-private partnership encourages rapid completion, in accordance with the planned budget and with no mistakes.
- 4. It is possible to construct objects and provide services that are otherwise unfeasible. This represents the main advantage, and helps the public authorities make a long-term strategic overview of the services they will need over an extended period of time.
- 5. The concept helps in the reduction of the national debt, and frees up state capital that can be spent on other government services.
- 6. The expertise and experience of the private sector encourages innovation, which leads to the reduction of costs, shorter delivery times, and improvements in the process of construction and management of the objects. The development of these processes helps the development of best practice.
- 7. Repairs and maintenance of the resources and services are performed in accordance with a predetermined standard, throughout the entire lifetime of use of the constructed object.
- 8. It allows for investment decisions to be based on comprehensive information, seeing as how they require defined project risk analyses, by

both the creditors and the Government, at the very beginning of the project.

- 9. It allows for taxpayers to pay a lower amount of funds for the financing of infrastructure development.
- 10. The government or public authority retains strategic control over the entire project and service.
- 11. The process can help in reforms of the public sector.

The European Investment Bank often emerges as one of the international investors in public-private partnerships in Europe, which contributes to a higher credibility of the infrastructure project, but also allows the project participants to concentrate on activities that best suit their capabilities. The key determinant of the public sector is a development policy and the satisfaction of the need for particular services, while the key to success of the private sector (in this case, the European Investment Bank) is the delivery of these services at the most efficient cost.

#### **European Bank for Reconstruction and Development (EBRD)**

The European Bank for Reconstruction and Development was established with an aim of assisting Eastern European countries in the construction of an economic structure in accordance with market conditions. The European Bank for Reconstruction and Development approves loans for capital infrastructure projects. The share capital of the European Bank for Reconstruction and Development is around 23 billion euro, and the funds are intended for placement in both the public and private sector. The Bank promotes transition to a market economy by investing into the private and public sector. The European Bank for Reconstruction and Development supports privatization and restructuring, the standard of living, as well as long term, environmentally sustainable development. This is corroborated by the fact that around 17% of the total investments are intended for the improvement of impacts on the environment. All projects involving the European Bank for Reconstruction and Development promote a healthy investment climate, which is the reason why it represents the most important source of funding for projects in Eastern Europe. It follows the highest standards of corporate governance and sustainable development in all operations.

Each of the projects of the European Bank for Reconstruction and Development is tailored to the needs of the client, and the specific situation in the country, region and sector. Direct investments typically range from 5 to 230 million euro. The European Bank for Reconstruction and Development provides loans and equity finance, guarantees, leasing facilities and trade finance. It usually finances up to 35% of the total project costs. The European Bank for Reconstruction and Development offers a wide range of financial instruments, and has a flexible approach in the structuring of its financial products. The main forms of direct financing that it offers are loans, equity and guarantees.

The loans are tailored to meet the specific requirements of the project, thus the loans are different for small and larger projects, depending on the amount of

needed funds. Loans for larger projects on average amount to 25 million euro. The loans are structured with a high degree of flexibility in order to provide credit profiles that suit the client, and correspond to the project's needs. The basis for a loan is the expected cash flow of the project, and the client's ability to repay the loan during the contract period. A loan can be secured with the assets of the debtor, and/or it can be converted into shares or paired with equity. The details are negotiated with the client and relate to the characteristics of the loan, such as (see /18/):

- ➤ Loan amount (5 15 million euro, although it may be a lower amount in certain cases).
- Interest rate (fixed or variable).
- Senior, subordinated, mezzanine or convertible debt.
- Currency (foreign or local currency).
- Maturity period (short and long, from 5 to 15 years).
- Specific grace periods can be negotiated into the project.

The European Bank for Reconstruction and Development also approves credit lines for smaller projects, mostly supporting local commercial banks, which in turn provide loans to small and medium enterprises and municipalities. The tools that may be available include credit lines, interbank loans, reserve (rehabilitation) loans and equity investments. The European Bank for Reconstruction and Development also makes capital investments of values ranging from 2 million euro to 100 million euro, into industry, infrastructure and the financial sector. There is a difference here as well depending on the size of the projects. The capital instruments and quasi-capital instruments that it uses are: ordinary shares, preference shares, subordinated loans, bonds, notes, redeemable preference shares on the stock exchange and off-exchange, the signing of share issues of public or private companies, as well as financing of the transfer of shares in existing companies.

The European Bank for Reconstruction and Development also holds a share in investment funds, which invest into medium-sized companies that need to expand their business operations. Investment funds are focused on specific regions, countries and industry sectors, have a local presence, and are manager managed. Their main investment criteria are set in accordance with the investment policy of the European Bank for Reconstruction and Development.

#### **Council of Europe Development Bank (CEB)**

The Council of Europe Development Bank is a multilateral development bank, which was at the time of its establishment aimed at solving the problems of refugees and displaced persons, only to later expand its activities onto the strengthening of social cohesion (a more balanced social development) in Europe. The Council of Europe Development Bank represents the main instrument of a solidarity policy, thus it often participates in the financing of social projects, contributing to the improvement of the quality of life. The Bank participates in the financing of projects proposed by the Western Balkans

Investment Framework (WBIF). The participation of the Council of Europe Development Bank in the Western Balkans Investment Framework derives from the framework defined by EU member countries and the enlargement policy, thus the participation of the Council of Europe Development Bank on such projects is focused on assisting the development of social infrastructure of future member states.

In 2010, out of the total amount of € 2,267.38 million approved for the development of social infrastructure by the Council of Europe Development Bank, € 67 million, or 3% of the total value of investments, were approved for the realization of social infrastructure projects in Serbia. The approved funds are intended for the sectors of housing of homeless people and people with low incomes, as well as the sector of education and specialized training.

# African Development Bank (AfDB)

The African Development Bank Group is a multinational development bank supported by 78 member states, which consists of two entities: the African Development Fund (ADF) and the Nigeria Trust Fund (NTF). The African Development Bank operates in close cooperation with other international financial institutions, including the World Bank group, and it often approves additional funds for joint projects and initiatives. Through its activities, the Bank covers a great number of sectors, giving particular importance to sectors related to agriculture, transport, industry, health and education, energy, environment, gender equality, and population activities. The Bank mostly promotes projects in infrastructure, providing particular support to public-private partnerships, which it supports in the form of both loans and capital investments. In these activities, especially mentioned should be the bank's involvement in (see /7/):

- > Advisory activities for students related to the structuring of arrangements,
- Advisory activities related to the legal aspect of project realization, which is important to the private entity that is entering into a suitable investment project.

In the field of project financing, the AfDB most often participates as a lender in investments into infrastructure development projects through public-private partnerships, but also projects that do not involve the public sector. It applies "UA budgeting" when financing, i.e. budgeting based on the accounting unit. This implies that the entire project is transparent, decentralized and controlled. This is not at all simple because it implies the fulfillment of appropriate assumptions regarding the realization of the project itself. In 2010, out of the total value of 4.1 billion accounting units intended for the development of the African continent, the African Development Bank Group participated with 2.58 billion accounting units, which represents 63% of the value of the total investments.

It should be noted that the Bank also approves guarantees to potential creditors, i.e. business partners. The Bank often invests into project organization when applying the concept of project financing of infrastructure projects, but is also

often prepared to purchase debt securities (municipal bonds) in order to support quality and development-oriented infrastructure projects.

# Islamic Development Bank (IDB)

The Islamic Development Bank was established with the purpose of promoting the economic development of its member countries. The Bank operates in accordance with the principles established in Islamic law, which also implies an interest rate change on the borrowed amount. The Bank participates in the realization of projects with subsidized capital as well as other forms of financial support, all with an aim of stimulating economic and social progress. It often finances the development of pre-investment studies, which is particularly important in developing countries where this type of technical assistance is very significant.

Financing is provided in the form of grants that can amount to a maximum of 300,000 Islamic dinars (1 Islamic dinar equals around \$ 1.50), or interest-free loans over a period of 16 years with a 4 year grace period. From the aspect of project financing, various forms of participation of this financial institution can be found in practice. Thus in 2010, the Islamic Development Bank approved 363 projects valued at \$ 6,961 million, of which \$ 2,865 million was invested into infrastructure, of which \$ 1,211 million went to the energy sector, while \$ 1,018.8 million went to the sector of transport (see /10/). The Bank approves financial resources through credit arrangements, leasing arrangements, trade participation and equity participation. In each of the forms of approval of financial resources, it is important to emphasize that the projects are believed to have a strong impact on economic and social development.

#### Asian Development Bank (ADB)

The Asian Development Bank represents the main source of financing for the Asia and Pacific region. Like every other multilateral agency, the bank's role is to be a catalyst between available financial resources and projects, in regions where they are the most needed. Furthermore, the bank has a promotional role towards the governments of countries that are members of the Bank, as it encourages them in the process of securing a political and institutional framework for the development of underdeveloped member states. It can be said that the Asian Development Bank is dedicated to helping the development of its member states.

One of the main goals of the Asian Development Bank is the development of modern economies of underdeveloped member states, in order to successfully integrate them with other member states, as well as other economic systems in the world. In 2010, the Bank invested \$ 17.5 billion, including \$ 3.7 billion that went into partnerships through co-financing. The main means of assistance are loans, grants, political mediation, technical assistance and equity participation. In the field of project financing, the Bank is predominantly focused on the strategic sector, i.e. the sector of infrastructure. In this sense, the leading sectors are telecommunications, energy, water, and transport infrastructure. In 2010, \$ 2.32 billion were invested into the water sector, the sector of transfer and delivery of

electrical energy received \$ 1.76 billion, while \$ 1.2 billion were invested into transport infrastructure (see /1/).

There are numerous forms of assistance for private investors as well, which are mostly based on credit arrangements, the issuance of guarantees, as well as cofinancing of investments. Nevertheless, in such circumstances the Asian Development Bank is most often oriented towards the sector of infrastructure and industrial projects, which lead to visible social and economic improvement of the quality of life.

#### Inter-American Development Bank (IDB)

The Inter-American Development Bank is the largest and oldest regional multilateral development bank, while its main mission is aimed towards the financing of economic, social and institutional development in Latin America and the Caribbean. The Inter-American Development Bank Group consists of the Inter-American Development Bank (IDB), the Inter-American Investment Corporation (IIC) and the Multilateral Investment Fund (MIF).

The Inter-American Development Bank Group approves credit lines and grants with an aim of providing financial support to development projects and strategies in key areas that contribute to the reduction of poverty, the expansion of growth and progress, the promotion of sustainable energy sources, reduction of the impacts of climate change, as well as increased investments into water supply, infrastructure and private sector development. In 2010, the Inter-American Development Bank approved \$ 197 billion in value of loans and guarantees for the financing of projects of a total value of over \$ 420 billion, as well as \$ 4.1 billion through various forms of grants and technical assistance contingents. The Bank's credit rating is AAA (see /9/).

With experience of over fifty years in the financing of infrastructure projects, the Inter-American Development Bank has certainly contributed to the improvement of living conditions in its member states, as well as the entire region. It provides support predominantly through credit lines to private and legal entities, but also through analytical and expert assistance in finding the best solutions for member states regarding infrastructure improvement. Thus in 2010, The Bank had invested \$ 5.4 billion into infrastructure projects.

#### German Development Bank (KfW)

The German Development Bank (KfW) is a member of the banking group bearing the same name, whose goal is conducting business operations before the German Government, thus helping achieve goals related to the reduction of poverty, climate change, and providing peace and globalization, especially to the inhabitants of the poorest parts of the planet. The German Development Bank together with its partners, which include representatives of other states, public and local authorities, assists the implementation of long-term and sustainable goals related to the development and improvement of the quality of life.

The German Development Bank (KfW) is in the function of the German Investment and Development Company (DEG), which is primarily focused on investing and creating jobs in developing countries. The DEG is one of the

largest financial institutions in Europe, which has ever since its establishment been turned towards the improvement of the quality of life in its partnering countries. The DEG finances and structures the investments of private companies in developing countries and countries in transition, with an aim of securing sustainable development and economic stability.

During 2010, the KfW banking group provided 81.4 billion euro, intended for the development of infrastructure, industry, environmental awareness, and programs in the fields of ecology, housing and education, in Germany, as well as other countries around the world. It is important to note that as much as 59.9 billion euro of the total amount was invested into international projects, of which 9.3 billion euro was invested through the project financing concept.

# 4. THE PARTICIPATION OF FINANCIAL INSTITUTIONS IN PROJECT FINANCING OF INFRASTRUCTURE PROJECTS IN SERBIA

Today, project financing is applied in highly developed countries for financing of the largest investment projects. However, even in developing countries it is showing its superiority in comparison to direct investments and other forms of investment, which also makes it attractive in our own current conditions and environment as well. However, the current financing of infrastructure projects in Serbia through the engagement of foreign funding sources was mainly based on loans from international organizations for the financing of development (predominantly the World Bank and European investment banks), and to a certain extent, export credits and commercial bank loans.

The commercial banks in Serbia are becoming increasingly involved and are approving loans for various types of infrastructure projects. However, the conditions under which the loans are approved depend on the manner in which the given banks gather the funds, the loan refinancing conditions of international financial institutions, as well as credit risk assessment of the municipalities. The beginning of development of the loan market by local authorities coincides with the adoption of the Law on Public Debt in 2005, and the appearance of the first banks that were willing to accept the credit risk of local government units. The development of bank loans has been significantly influenced by the presence of international donor and financial institutions, which supported the financing of local infrastructure projects. Based on the Annual report on operations and work results of the National Bank of Serbia in 2010, an increase can be noted in approved credit lines to the economy amounting to 154 billion dinars, of which 70 billion (2.8%) is directed into investment loans (see /13/). This indicates an increasingly strong involvement of banks in the financing of infrastructure development, and the implementation of the project financing concept on infrastructure development in Serbia. The issuance of municipal bonds in Novi

Sad should also be mentioned, of a total value of 35 million euro. Novi Sad is the first city to provide funding for its infrastructure in such a manner (see /21/).

The World Bank is still present in the financing of infrastructure projects in Serbia, and has in 2010, through the International Finance Corporation, invested \$ 100 million into improvements of the public sector and further strengthening of the private sector (see /8/). The efforts of the International Finance Corporation are predominantly focused on the creation of an attractive business environment, and the provision of consulting services in the process of improving activities related to infrastructure development, as well as the implementation of the concept of public-private partnerships in the sectors of health care and education, privatizations and construction of infrastructure.

Serbia, in the same manner as other developing countries, mostly uses loans from multilateral banks for infrastructure development, which are by their financial strength and credibility certainly the most dominant investors into project financed infrastructure projects. In this sense, it is necessary to emphasize the role of the Western Balkans Investment Framework (WBIF), which makes up the regional framework for a controlled and directed development of countries that are expected to join the European Union. The Western Balkans Investment Framework was established by the European Commission, European Investment Bank (EIB), European Bank for Reconstruction and Development (EBRD) and the Council of Europe Development Bank (CEB), with support from European Union member states, for the purpose of financing priority programs in the countries of the Western Balkans.

The goals of the Western Balkans Investment Framework are a better integration and coordination of the relationships between bilateral donors and investors (EIB, EBRD and CEB) on one side, and the recipient countries of the financial assistance and credit arrangements. This achieves a higher level of harmonization and cooperation regarding investments into the socio-economic development of Western Balkan countries, and increases the financial capacity intended for the development of the countries' infrastructure, which is harmonized with the expected time of their joining of the European Union. The Western Balkans Investment Framework is managed by a Steering Committee, and the Group of donors who are investing into the infrastructure projects.

By the end of 2010, a total of 81 grants for 73 projects were approved, of a total value of 139.2 million euro. Of the total number of approved grants, 69 represent technical assistance, while the remainder is directed towards the co-financing of infrastructure. In Serbia, this financial institution has so far invested into projects a total value of 24.6 million euro. Observed specifically by sector this amounts to 2 million euro for 3 projects in the field of energy, 4.5 million euro for 3 projects in the field of ecology, 2.9 million euro for the realization of 5 projects in the field of development of social infrastructure, and 15.2 million euro for the sector of transport (see /16/).

Projects into which the Western Balkans Investment Framework invests are projects that contribute to the economic, social and ecological development of

the countries of the Western Balkans, which includes Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Kosovo (under Resolution 1244 of the U.N. Security Council). The projects that the Western Balkans Investment Framework is especially interested in financing include the fields of ecology, energy, transport and social infrastructure, while prioritization of the investment projects within these sectors is proposed by the countries that are applying for the financial support.

# 5. CONCLUSION

With an increasing number of investors in Serbia, as well as development of the need for the improvement and construction of infrastructure, the need also arose for project finance. Project finance as a financing concept is not only based on the assessment of business operations of the enterprise in the past, but it discusses and deals with justification of the financing, as well as analyses of the project itself. In this sense, this type of financing particularly contributes to the improvement of the process of financing of the construction of residential and commercial buildings, industrial and tourist facilities (hotels, industrial plants, warehouses, logistics centers) and commercial establishments (supermarkets, shopping centers, etc.), but primarily the construction of infrastructure objects (such as investments into facilities for operations and support operations in the fields of energy, transport, irrigation, telecommunications, oil, gas, education and health care).

Project financing as a concept of financing infrastructure projects in Serbia has not yet come to life in the proper light, but it can be said that steps are being made in that direction. The conclusion from the experiences of EU Member States and countries of the region regarding the implementation of infrastructure projects through the project finance concept, is that they are certainly financially the most extensive and comprehensive projects, which, in order to be successfully implemented in Serbia, require greater participation of the private sector in the financing of infrastructure projects, which is also supported by the new Law on public-private partnerships.

In this regard, it is necessary to define clear priorities in the field of infrastructure, for which project financing can emerge as a convenient method of financing. A comprehensive strategic document is necessary, one which will set clear guidelines for potential investors and international financial institutions regarding what the state sees as priority within a given sector. In addition, it is necessary to make use of the experiences of countries in the region that have already developed good practice in the use of this method of financing.

International financial institutions recognize the potential of this concept of financing infrastructure, thus they accordingly assist the public and local governing bodies in the development of a legal framework that will promote and

facilitate the securement of necessary financial resources, all in the function of investing into the quality of the living and business environment.

# **LITERATURE**

- 1. Asian Development Bank, (2010), Annual Report 2010, Volume 1, pp 45.
- 2. Chambers J, (2007), Infrastructure Research Report: Institutional Investment Consideration, Pension Consulting Alliance, Inc. New York, USA.
- 3. Euromoney, (2008), Institutional Investor PLC, London.
- 4. European Commission, (2011), Commission launches consultation on "Europe 2020 Project Bonds" to fund infrastructure, Brussels, pp. 3.
- European Investment Bank Group, (2010), Statistical Report 2010, Volume III, pp. 36.
- 6. Fabozzi F. J, Nevitt P. K, (2000), *Project Financing, Seventh Edition*, Euromoney Publications, London, pp. 67.
- 7. Gatti S, (2008), *Project Finance in Theory and Practice*, Designing, Structuring and Financing Private and Public Projects, Elsevier Inc, Oxford, pp 174.
- 8. IFC Annual Report, (2010), Where Innovation meets impact, IFC, pp.15.
- 9. Inter-American Development Bank, (2010), Annual Report 2010, pp.13.
- 10. Islamic Development Bank, (2010), Annual Report 1431H, 2010, pp. 2-6.
- 11. Makojević N, (2011), Venture capital funds alterative sources for economic development financing, Industry, Vol. 39 (1), pp. 13-20.
- 12. Merna T, Njiru C, (2002), *Financing Infrastructure Projects*, Thomas Teleford, London, pp. 155.
- 13. National Bank of Serbia (2010), *Annual report on operations and work results*, Belgrade, pp.71.
- 14. Poznanić V, Benković S, Jednak S, (2011), Risks of project financing of infrastructure projects, Industry, Vol 39(1), pp. 111-142.
- 15. Project Finance International, (2011), League Tables, Issue 448, pp 56.
- 16. Western Balkans Investment Framework, (2010), Annual Report 2010, pp. 20.
- 17. World Bank, (2010), Annual Report 2010, Washington D.C, pp. 6.
- 18. http://www.ebrd.com/ (accessed on July 22<sup>nd</sup>, 2011)
- 19. http://www.ifc.org/ (accessed on July 20<sup>th</sup>, 2011)
- 20. http://www.ipfa.org/ (accessed on July 27<sup>th</sup>, 2011)
- 21. http://www.novisad.rs/ (accessed on July 29<sup>th</sup>, 2011)
- 22. http://www.worldbank.com (accessed on July 22<sup>nd</sup>, 2011)
- 23. http://www.worldbank.org/ida/ (accessed on July 20<sup>th</sup>, 2011)

Corresponding Author: Sladjana Benković, benkovicsladjana@gmail.com

To cite article, use the following format: Benković, S., S. Barjaktarević Rakočević, A. Zeremski.: S Participation of financial institutions in project financing of infrastructure projects, Industrija, Vol. 40, No. 1, pp 149-171