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Procedia - Social and Behavioral Sciences 48 (2012) 2150 – 2158

Transport Research Arena– Europe 2012

Greek Motorway Concession Contracts in Progress under Financial Stress: a Rebalancing Proposal

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Abstract

Five motorway concession contracts are currently under implementation in Greece. The total investment amounts to 8.7 billion €. The completion of projects construction was foreseen by 2014. Following the recent financial crisis, the traffic volume has decreased and the market interest rates and country's investment risk have increased considerably. Construction works are currently subject to delay due to time-consuming administrative procedures, which has resulted in claims by constructors and concessionaires. Furthermore, users apparently perceive the toll rates as being expensive; some of them refuse to pay. The results of the updated financial models show loss of contracts' long term financial equilibrium. In this environment, the Lending Banks have imposed a payment drawdown stop on four out of the five concessions. In this paper, the problematic of these concessions is analyzed and a recovery plan within the European Union's legal framework is proposed.

Keywords: concession contracts; motorways; project financing; financial recession.

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1877-0428 © 2012 Published by Elsevier Ltd. Selection and/or peer review under responsibility of the Programme Committee of the Transport Research Arena 2012
doi:10.1016/j.sbspro.2012.06.1188

1. Introduction

An underdeveloped road network is likely to be associated with sub-optimal economic performance and quality of life. Governments are constantly looking for ways to develop their networks and other transport links to meet their political and social needs. Around the world, major public infrastructure procurement through concession contracts was booming before the financial and credit crisis. The combination of the need for public infrastructure development and service level improvement, the scarcity of public funds and the quest of private investors for new, profitable opportunities was fostering this trend.

The recession increases the demand for concession contracts from governments, as it is seen as a way to continue building infrastructure with limited effect on the State Budget deficit. For the private sector, this is an opportunity to get long-term business from the State in a period of financial instability. On the other hand, the financial crisis has limited the funds available for lending by the banks or investment by the private investors. The capabilities of the financial institutions have decreased markedly. The banks and the investors have become more prudent and ask for high loan interest rates and high return on equity. As a result, concession contracts are currently relatively scarce and more expensive for the client. In the light of the multitude of parameters influencing the economic life of infrastructure projects, in particular during the recession's unstable environment and credit problems, it becomes vital that the long term financial viability of the project in conjunction with the fair sharing of risk between the contractual parties should be well established and clearly embedded in the concession contracts. This will contribute substantially both to receiving sturdy offers and avoiding future painful negotiations or even project failure.

In this paper, the problematic of four motorway concession contracts in progress during the current recession in Greece is analyzed and a recovery plan within the European Union's legal framework is proposed.

2. Greek Motorway Concessions in progress

The Greek State tendered five concession contracts to finance construct and operate motorways that form part of the Transport European Road Network - TERN (Fig. 1). Overall, the contracts foresee the construction of 740 km of motorway, the upgrading to motorway standards of 540 km of existing roads and the operation of 1,335 km (Table 1).

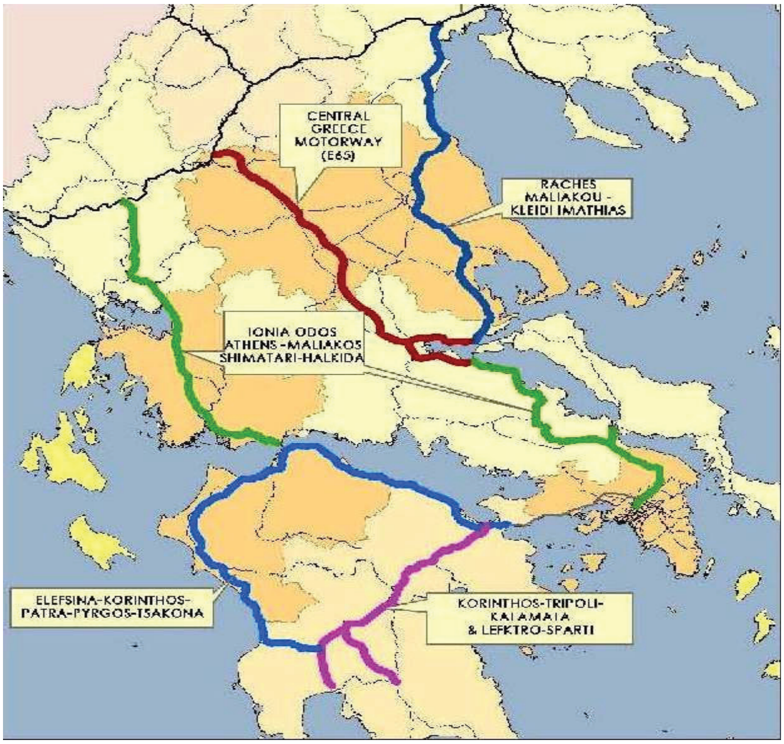

Fig. 1. Motorways under Concession Contracts

Table 1. Motorways Contracts

Motorways contracts awarded	Length to be Constructed (km)	Length to be Upgraded (km)	Length to be operated* (km)
IONIA ODOS ( )	160	164	324
AEGEAN MOTORWAY ( )	25	205	230
OLYMPIA ODOS ( )	284	82	366
MOTORWAY OF CENTRAL GREECE (E65) ( )	175	-	232
MOREAS MOTORWAY ( )	100	83	183

* including motorway sections constructed by the State

Following international procurement procedures, the five concession contracts were ratified by the Greek Parliament in 2007. Their Concession Commencement Dates (CCD) were (after the financial closing of agreements) in 2008, from March to August. The concession period is fixed to 30 years. The Concessionaire undertakes the construction and operation cost and risk and is repaid through fees (tolls, etc.) collected from the project users. It is clear that any profit to be generated for the shareholders is expected after the project initiates operation, while in the meantime the Concessionaire is responsible for the financing of the development process. The contracts lay down penalties for failure to meet contractual obligations as a guarantee that the services will be provided properly and in accordance with Public Procurer requirements (penalties, compensation for damages etc). The contractual structure is depicted in Fig. 2.

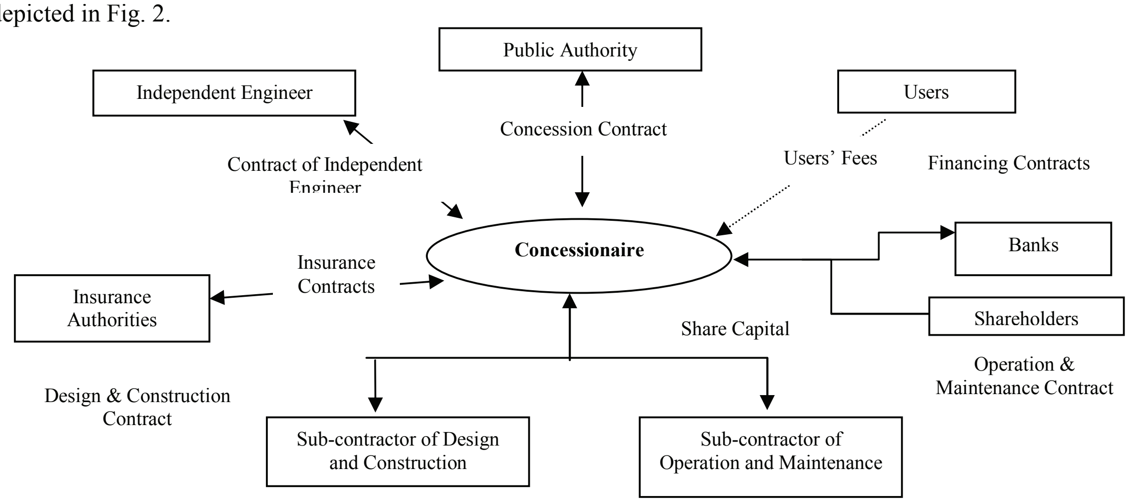

Fig. 2. Typical structure of a Greek motorway concession contract

The following parties are involved in these projects:

- Concessionaires: 6 Greek and 6 foreign construction companies
- Constructors: 6 Greek and 4 foreign construction companies
- Lenders: 11 Greek and 32 foreign banks (Fig. 3).

The financing sources during construction are presented in Table 2. These concession contracts are subsidized by the Public Budget (including the European Contribution) through the State Financial Contribution (SFC). The EU contribution is estimated at about 65% of the SFC. The Concessionaires start collecting tolls from the CCD for the existing sections, even if they need upgrading; the toll revenues are an important funding source during the construction period.

The risk sharing between the parties is depicted in Table 3. For the three high traffic projects, the Concessionaires have fully undertaken the demand risk. For the two low traffic projects, the Concessionaires have undertaken the demand risk together with the State, i.e. the Concessionaires have undertaken the risk up to a certain revenue level. If the revenues drop below the agreed level, the State has to pay the maximum amount of the operation subsidy agreed in the contract. The operation subsidy decreases as the revenue increases. The State has also undertaken in all projects the expropriation delay risk, the archeological investigation delay risk, the environmental permit delay risk and the change in Law risk.

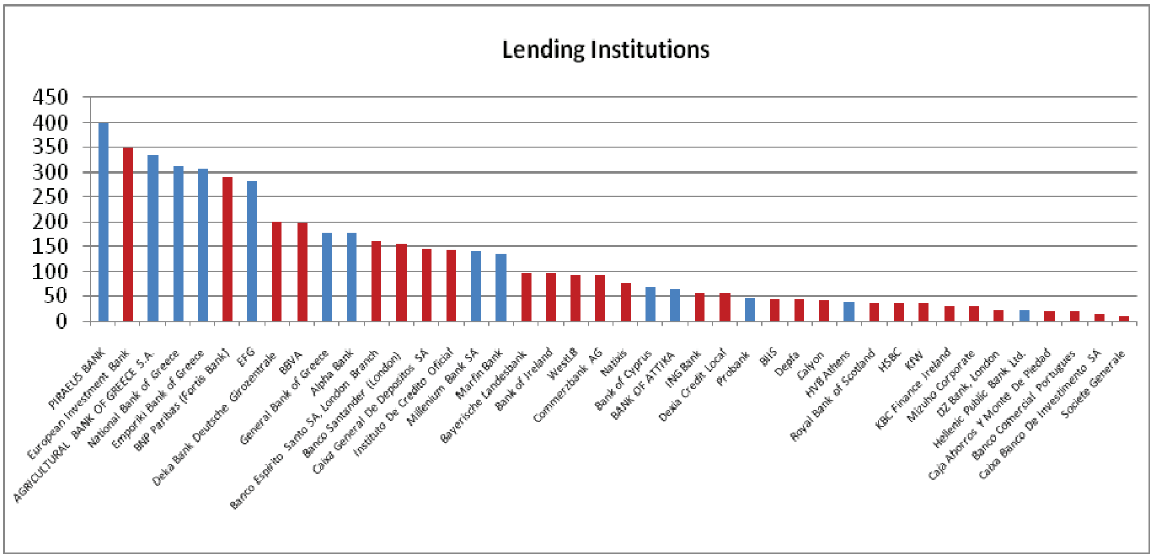

Fig. 3. Lending Institutions

Table 2. Funding Sources

Total Funding Sources	Amount
State Financial Contribution (SFC)	2,300 m €
Toll Revenues	2,300 m €
Loan Capital	3,300 m €
Share capital (Shareholders Committed Investment - SCI)	800 m €
Total	**8,700 m €**

Table 3. Concession Contracts – Risk Sharing

Motorways		Construction Risk	Demand Risk	Availability risk
High traffic	Olympia Odos	Concessionaire	Concessionaire	Concessionaire
	Ionia Odos	Concessionaire	Concessionaire	Concessionaire
	Aegean Motorway	Concessionaire	Concessionaire	Concessionaire
Low traffic	Moreas Motorway	Concessionaire	Concessionaire State	Concessionaire
	E65	Concessionaire	Concessionaire State	Concessionaire

In case of contract termination during construction due to concessionaire's default, the State will pay to him the cost of the works properly executed, reduced by the SFC, the SCI and the toll revenues. In case of State's default, the State will repay mainly the loan cost and the SCI cost. The above risk sharing means that the whole or the major part of the project loans is indirectly secured by the State. The SCI is secured only in case of State default.

During the operation of the high traffic motorways, revenue is shared between the Concessionaires and the State. The payments to the State precede all other payments by the Concessionaire. For the low traffic motorways, a State operation subsidy is foreseen.

Currently, all projects are in the construction phase. By the end of 2010, after 50% of the total construction period had elapsed, the work progress on two of them was 50% and 70% respectively. For the other three contracts, the progress was 17%-24% after 50% of the total construction period. In other words, progress was not satisfactory.

3. The Problems

The concession contracts present many inherent problems. Motorways were planned for road sections with low volume traffic, which resulted in increases in project budget. Construction was planned to be completed in a short period of time, which resulted in increased loan requirements. There were State commitments almost impossible to fulfill, e.g., 12 months for the delivery of project sites to the Concessionaires, which resulted in Concessionaires' claims against the State. The Basic Design needed many improvements. Tolls were imposed on sections of motorways not yet completed, which resulted in user complaints.

Problems were encountered during the projects' implementation, due either to Concessionaire or to State delays. Delays for which the Concessionaires were responsible refer to design completion, preparation of environmental permit files and mobilization of construction resources. The State has been responsible for delays refer in the delivery of project sites, displacement of utility networks, archaeological investigations and environmental permits issuance.

The Greek State has taken action in order to accomplish its contractual obligations as fully as possible: the expropriations have been submitted under a special legal status to accelerate procedures; VAT reimbursement has been accelerated; the SFC payment has been linked to the progress of the works, in order to limit any State delays; legislative arrangements have been made to deal with toll payment violators (imposition of administrative sanctions).

The first signs of the concession contracts financial instability started to appear by the end of 2010; they became more evident in 2011. The economic crisis resulted in traffic and revenues decline; traffic volume depends on the performance of the economy and the users' reaction. Adding to the uncertainty, there is no possibility to accurately predict traffic volume, in particular during a transition period; the further in the future the traffic forecast, the greater its inaccuracy.

Furthermore, the international financial and credit crisis caused disturbances in the operation of many lending institutions, both Greek and foreign. The Lenders have been bound to finance the projects with low interest rate margins, compared to the rates currently available to the Greek State in the capital market. On top of which, they are afraid that the Greek State will not be able, in the middle of the crisis, to honour its obligations derived from the concession contracts. The Lenders have requested an updated traffic model and financial model to re-evaluate projects' long term viability. In the face of these circumstances, the Lenders have suspended the drawdown payments in four out of five concession contracts (Olympia Odos, Ionia Odos, Central Motorway and Aegean Motorway).

In fact, the traffic decreased by 30% compared to the Concessionaires' forecasts on CCD. There are a number of users who refuse to pay tolls; this number may add another 3% on average but more than 10% for some period of time. The inability to install toll stations in State built Sections, as agreed in the contracts, is another source of diminished revenues. Based on the actual traffic volume and the Greek GDP forecast of international financial institutions, the updated models of the traffic advisors employed by the Concessionaires and Banks presented a 40% decrease in total revenues throughout the whole concession period, as compared to the initial revenue previsions.

These updated traffic forecasts revealed a funding shortfall for the four projects, both during construction and operation. During the construction period, the Concessionaire's toll revenue covers an important part of the construction cost; during the operation period, they provide to the State its revenue share, repay the operation and maintenance cost and the loan capital and interest and, last of all, they pay the shareholders' dividends, if any. Given the risk sharing in the contracts, the order of the Concessionaire's payments is presented in Fig. 4: payment to the State; operation and maintenance expenses; debt service; shareholders' return. The substantial decrease in traffic has driven down revenues for all projects. If toll revenues are low (black line in Fig. 4), the debt may not be serviced in full and certainly the shareholders receive no return.

There is no payment drawdown stop on the Moreas project; it was already making satisfactory progress by the time of the drawdown stop on all other projects. The Lenders at that time had completed a significant level of drawdown on Moreas project. The construction financing was not adversely affected by the traffic decline and, more importantly, the loan repayment is secured by the State operation subsidy that the Concessionaire is entitled to, according to the concession contract.

Given the payments drawdown stop on all other projects, all Concessionaires have suspended construction works.

There is an absolute need for the Greek State to reestablish the long-term financial equilibrium of the concession contracts in order to ensure that projects are completed and operational as soon as possible for many reasons: to accelerate the country's economic growth, to enhance employment, to attract future investors, to overcome the reservations that the international markets express regarding the country's investment risk. In contrast, contract failure may drive the country into a long disinvestment period and further rise of unemployment.

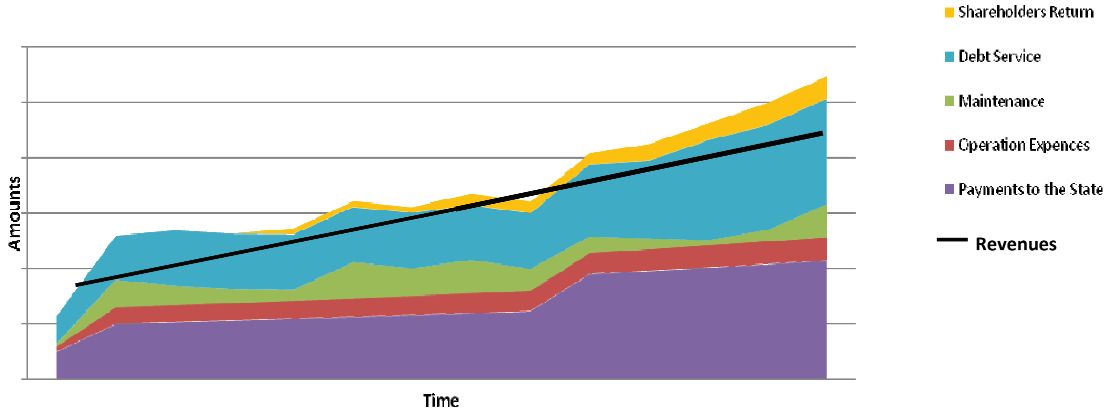

Fig. 4. Concessionaires' Payments and Toll Revenues

4. The negotiation framework

In order to start negotiations with the Concessionaires, the State signed with them a Framework of Understanding (FoU) in June 2011. The FoU sets the following principles be followed during the negotiations with the Concessionaires and the Banks:

- Minimization of amendments to the contractual provisions.
- Respect for the general principles of the EU Treaty.
- Finalization of the project designs/alternative designs taking into account: the optimization of the cost-time-revenues ratios in relation to the future needs; the socio-economic impact of each project section; the project time-schedule and the availability of financing resources.
- Redetermination and agreement on the revenues forecasts, during construction and operation period.
- Identification and agreement on claims pending and on the conditions to be set for their payment.
- Re-evaluation of project operation cost, in combination with the new toll policy (interoperability/ electronic tolling).
- Agreement on the new toll policy impact on the projects revenues.
- Re-evaluation of the projects financing needs and the respective lenders' positions.
- Re-evaluation of the possibility of servicing the Project's loans after the above interventions.
- Investigation of the optimum economic and legal methodology of utilization of the expected State revenues for ensuring (if necessary) the repayment of the loans. Determination of the conditions (economic – time) for recovery by the State of its revenues used according to the above.
- Elaboration and agreement on an Updated Financial Model, which will incorporate all the above.
- Identification, evaluation and agreement on the necessary modifications to contractual documents, including the Designated Loan Agreements.

The Greek State is planning a toll reduction during the construction period in the incomplete sections (under upgrading) in order to alleviate the financial burden of their users. The Concessionaires have proposed a discount policy for the frequent users who reside in the vicinity of frontal toll stations. Furthermore, the State is aiming at the implementation of a free flow fully proportionate electronic toll collection system on all motorways in few years' time, within the framework of the TERN interoperability.

It should be taken into account that during their evaluation of projects and before concluding the Loan Agreements, the Lenders and the Concessionaires adopted a stress scenario (Lenders Low Case, LLC), taking into consideration a traffic drop in the order of -20% compared to the traffic forecast in the base case scenario. Up to that level, the project revenue, after payments to the State, can cover the operation and maintenance expenditures and the loan repayment. With this reduced traffic, the Concessionaires' IRR was very limited (0% - 2,7%).

5. Literature survey

A literature survey was conducted in order to investigate recent international experience in similar situations.

In March 2010 the European PPP Expertise Centre (EPEC) in collaboration with the EIB published a study that provides background information on the role of capital markets in concession projects financing and their principal advantages and disadvantages compared to traditional bank financing. According to the study, the actions that the public sector should undertake in order to encourage the capital markets to finance infrastructure projects under the concession contract framework are: the use of experts on capital techniques to assist in establishing sound contractual terms; the contract terms to be as much as possible in line with accepted "international standards" to facilitate cross-border investments; to provide public guaranties; to provide fiscal incentives; to establish a public infrastructure bonds agency, which could intermediate for private investors or facilitate liquidity.

In 2009 the Business School at the University of Greenwich and in particular the Public Services International Research Unit published a study, which analyses privatizations and restructuring of public services worldwide, as well as concessions with financial difficulties. According to the study, the globalization of the credit crisis means that banks and investors are much more reluctant to lend to private companies; as a result most companies are practically unable to borrow money to finance concession contracts. The combination of recession and credit crisis also creates problems for the existing concession contracts, for two reasons. Firstly, the recession reduces toll revenues, which results in difficulties to pay interest and repay loans. Secondly, many Concessionaires raised short-term debts to launch their projects, expecting to refinance them with debt at lower interest rates once the projects become operational; during the recession it is very difficult to get new loans without increasing the financial cost substantially.

In August 2009, in collaboration with the EIB, the EPEC conducted research to provide a framework for analyzing potential responses to the financial crisis, as it affects the concession contracts across the EU. According to its findings, the nature of the current credit situation is complex and its impact on concession contracts can be summarized as follows:

- The collapse of the inter-bank lending market has drastically reduced liquidity; most banks, particularly those with a limited deposit basis, are struggling to raise funds even on short maturities.
- The banks' margins have increased substantially.
- The senior bank debt tenors have been significantly reduced.
- Some banks have partially or totally withdrawn from the Project Finance market; there is also evidence that previously active international players have become more oriented to their domestic markets and "relationship banking" is back in force.
- No viable capital market solution has emerged to replace the wrapped bond market.

Three main types of response for a viable operation of concession contracts are proposed:

- Remedial actions within the Procurer's control (fully committed bids to be obtained only at a late stage of the procurement process, often not long before financial close;, a form of funding competition;, shorter average life of loan).
- Remedial actions within Public Authorities' control (state guaranties, co-lending by the State).
- Remedial actions facilitating the entry of new investors (fiscal incentives for new investors, State guaranties to banks for risk mitigation, develop a "debt fund" concept - to raise long term debt from institutions and pool it into a lending vehicle, which will provide structuring, due diligence and monitoring services to the lending institutions).

In 2006 J. M. Vassallo investigated ways for traffic risk mitigation of highway concessions. He evaluated three mechanisms applied in Chile to mitigate traffic risk: the "Minimum Income Guarantee" (MIG), the "Least Present Value of the Revenues" (LPVR) and the "Revenue Distribution Mechanism" (RDM):

- According to the primary mitigation mechanism MIG the total guaranteed income of a project in present value is the same for all the bidders and is equal to 70% of the investment cost, plus the total maintenance and operation costs estimated by the public authority. The figure of 70% was chosen because on average the percentage of debt in a project finance structure is 70%. If the real revenues are less than forecast, then in any year of the concession period the State will have to compensate the Concessionaire for the difference. If the concessionaire decides to adopt this mechanism, he then resumes the obligation to share part of the revenues with the State whenever the traffic is more than forecast. The Concessionaire has to share 50% of the difference that accrues from the real revenues and the guaranteed revenues of the State. With this mechanism the traffic risk is shared and the lenders feel safer because part of the revenues is guaranteed. Its disadvantage is that the State might find it difficult to finance various concessions in a substantial economic downturn.

- With the second mechanism, LPVR, the traffic risk is reduced substantially and consequently future negotiations between the Concessionaire and the public sector are minimized. If the traffic is less than initially forecast, then the concession period is extended, and vice versa. According to State Law, the concession period cannot exceed fifty years.
- The third mechanism, RDM, guarantees a prefixed amount of revenues in present value to the Concessionaire. This also results in changes to the concession period.

Of the three mechanisms, the LPRV is proposed as the most appropriate, because it reduces any future negotiations between the contracting parties, since they share the traffic risk.

6. Proposals

The expectations of each of the three parties in the concession agreements (State, Concessionaires and Banks) have not been fulfilled. To avoid projects termination and lengthy legal disputes, all parties have to reduce their expectations and allow a lose-lose compromise at a lower potential level than the base scenario by also maintaining the contractual equilibrium in risk sharing.

Given the updated and reduced traffic forecasts and according to the contractual revenue share, the high traffic Projects still create revenues for the State, if completed. These revenues could be used to rebalance the financial models and restore the projects' long term financial viability. Under the current severe economic conditions, the State could "ensure" the Concessionaires' revenues up to the LLC scenarios during the operation period, i.e. by a State loan to the Project. The State support will "ensure" the debt and Concessionaire's equity repayment. The funding shortfall during the construction period, induced by the drop in traffic levels, could be counterbalanced by extending the construction period (Concessionaires' revenue increase) and/or by reducing the projects' scope. When the project revenues exceed the LLC scenario, the Concessionaires will repay the State loans. In any case, the State may determine the limits to negotiations with the Concessionaires according to the following principles:

- Application of self - finance principle to the (three high traffic) projects.
- Reassurance that the State will have priority in the recovery of the amounts granted to the projects to assist them to resolve their financial problems, in particular in case of an improvement in traffic revenues. The Concessionaires will not be allowed to obtain a better IRR for their shareholders unless the State loans are fully serviced.
- The operation and maintenance cost will be capped and the Concessionaire will commit to not exceeding that level, as long as the project State loan is not fully repaid.
- Decrease of shareholders IRR compared to that of the base scenario in the CCD.

The Constructors' claims should be handled outside the contract re-equilibrium, according to the contractual provisions. The Greek State should ensure the necessary additional funds to compensate them.

The current credit crisis results in financing cost increase, liquidity reduction and the country's investment risk increase. Within this context, the lending institutions request the increase of the lending interest margins and the decrease of their exposure. Appropriate interventions in the loan agreements are needed in order to keep the debt pricing at relatively low levels, e.g.:

- Reduce the Loan Capital by decreasing the project scope.
- Reduce the Average Loan Life by "cash sweep" in order to reduce Banks' exposure.
- Improve loan security in case of the low traffic project by making available State toll revenue from other project to pay the foreseen in the contract State subsidy (reduction of State risk to project risk).

For future concessions to be tendered, the contractual order for revenue sharing should be modified. The toll revenue should primarily serve the operation and maintenance expenses. Then the debt and the remaining amount should be shared between the State and the Concessionaire's shareholders, the distribution percentage being a tender award criterion (Fig. 5).

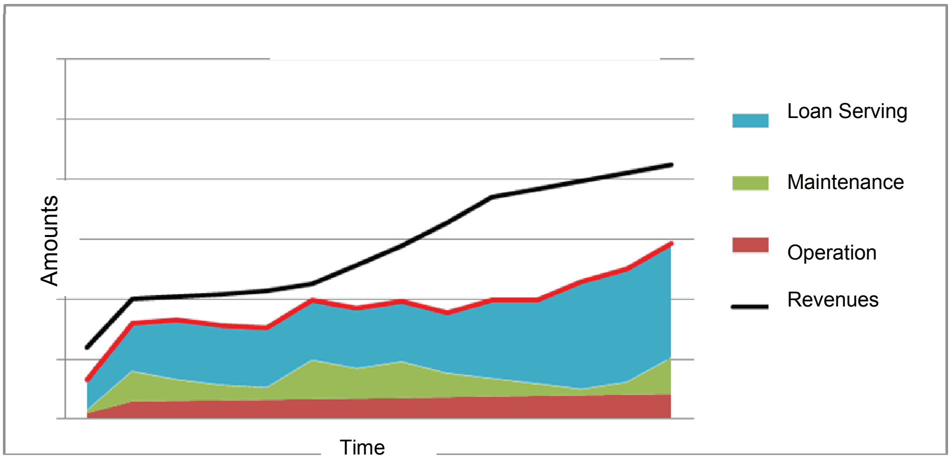

Fig. 5. Proposed Allocation of Revenues

7. Conclusions`

In the context of the current recession, the speedy and problem-free implementation of the concession contracts in question is very important for the development of the Greek economy and the increase in employment. By boosting these investments, which had already been launched but are frozen at the time of writing, the country can ensure the "fast wins" so necessary to attract new investments. Of course, the long term financial viability of a concession has a different value for each contracting party. The main three parties involved have to bridge their differences in interests in order to successfully implement the project. The social benefit and the achievement "of the best value for money" are the priorities for the public institutions. The private investors' interest lies in the actual profitability of the project after the debt and the State obligations have been fulfilled. From the lenders' point of view, the financial viability of the project corresponds to the repayment of the debt, which depends on the revenues created during the operating life of the project. This paper has proposed a methological framework in order to bridge these divergent interests under the current financial and credit crisis and achieve a long - term stable financial rebalance of the projects in question.

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