



HYBRID MODEL OF DEEP DISCOUNT PROJECT BONDS AND LAND LEASES FOR NEW TOLL ROAD PROJECTS IN INDONESIA

Budi S. Soepandji, Lukas Sihombing, Yusuf Latief, Ayomi D. Rarasati

Civil Engineering Department, University of Indonesia, Kampus UI Depok, Indonesia

Andreas Wibowo

Agency for Research and Development, Ministry of Public Works and Housing,
Jl. Panyawungan, Cileunyi Wetan, Cileunyi, Bandung, Jawa Barat, 40622 Indonesia

ABSTRACT

This paper proposes a new toll road financing model, which is a hybrid model of deep discount project bonds (DDPBs) and land leases for new toll road projects in Indonesia. We used a qualitative method to build the model based on existing literature. This concept was then utilized to conduct in-depth interviews with experts. Subsequently, the model was validated with a focus group discussion. The study revealed significant findings; for instance, the parent company does not need to create a new entity for carrying out such projects. It is sufficient to issue DDPBs; thus, it does not result in expenditures toward creating a consortium, which requires a significant amount of time. Furthermore, the government can add to its revenue by renting land along the toll road and thus reduce the burden of land acquisition costs from state budget allocation limits. This DDPB and land lease hybrid financing model can be used as a public-private partnership concept in funding a new toll road, wherein the privately-owned party uses a DDPB model to fund construction, and simultaneously, the government uses a land lease model to fund land acquisition. Thus, this hybrid financing model has great potential to reduce financial gaps.

Key words: Deep Discount Project Bonds, Financing Model, Land Leases, Toll Road.

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1. INTRODUCTION

Fund-raising schemes for new toll road infrastructure that are currently operational in Indonesia are Build-Operate-Transfer (BOT), supported BOT, performance-based annuity scheme (PBAS), construction contract (i.e., turnkey and Design-Build), and Indonesian State Owned Enterprises (SOEs) assignment [1]. Besides these investment schemes, the funding scheme that has been used until now for land acquisition is based on Government Decree No. 2 of 2012, wherein the government conducts land acquisition with funding derived from the state budget, a public service agency, and land capping.

Nevertheless, the current scheme still has problems; therefore, significant developments are not seen in toll road construction. There are three problems related to financing. First, there are problems in government financing, which makes limited allocation of state budget funds and causes delays in the disbursement of state budget funds for land acquisition. Second, the problem with equity financing is that there is inability of long-term investment financing and risk of low traffic and short section operation. Third, there is loan financing from the bank, which has a limited long-term lending capacity and requires a huge investment.

This paper aims to develop a DDPB and land lease hybrid financing model in the new toll road sector in Indonesia to ensure its smooth implementation. Hybrid here refers to the combination of funding from a private party through DDPBs and the government for land acquisition through revenue from land leases.

2. LITERATURE REVIEW

The main objective of a project bond is ‘to help the promoters of individual infrastructure projects attract additional private sector financing. Guarantees and other types of credit enhancement measures would reduce the risk for such third-party investors and thus act as a catalyst to re-open the debt capital market as a significant source of financing in the infrastructure sector’. Additionally, the aim of a project bond is ‘to enhance the credit standing of private entities that need to raise private funds for the infrastructure projects they promote’ [2].

Furthermore, the basic principle of a deep discount bond or zero-coupon bond financing model is that a bond is a contract that ensures that a bond holder knows the size of the principle value or face value and the due-date [3]. According to Daves et al. [4], a zero-coupon bond is a security, which has no interest payments; however, its main principle payment is conducted on the due date. Based on Faerber’s assessment [5], there are two risks of deep discount bonds: default risk and interest rate risk.

In addition, the build-lease-transfer (BLT) model is one through which investors fund a building and then rent it for a long period to an individual or a company [6]. On the other hand, in the build-own-lease-transfer (BOLT) model, the private sector or government sector provides a concession to a private entity to build a facility (and possibly design it) [7].

Furthermore, the hybrid system can be regarded as a combination of discrete or symbolic dynamics and continuous dynamics, the interconnection of simpler (hybrid) subsystems, and object-oriented modelling [8].

Therefore, based on the above literature review, we develop a conceptual framework. The DDPB and land lease hybrid model is a combination system between funding a project with a zero-coupon bond through a private party and funding land leases through the government. The product of this hybrid model is a toll road project in the construction phase and a land lease in the operation phase, as shown in Fig.1. To build the hybrid model, the next step is to follow the methodology.

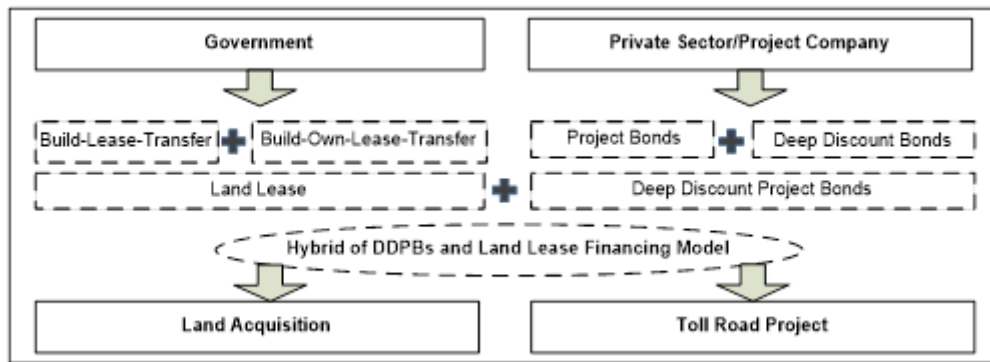


Figure 1 Conceptual Framework

3. METHODOLOGY

The question of this paper is how a hybrid of a DDPB and land lease financing model can be implemented in the case of Indonesian toll roads. Based on this question, this paper used a qualitative method with a desk-based study and interviews. In-depth interviews were conducted one-on-one with experts experienced in infrastructure financing and toll road investments.

The data collection process was divided into two stages: the hybrid model concept introduction and model validation. At the first stage, one-on-one interviews were conducted to develop a hybrid model from the proposed model concept. A total of 10 interviews were conducted with experts including policy makers, investors, and planners. To show the scope of the interviewee institutional affiliations, interviews were carried out with leading relevant organizations. The survey work was undertaken during May and June, 2016.

At the second stage, a focus group discussion (FGD) was conducted to validate the hybrid model concept. The data explored in this paper was drawn from focus group interviews with one group of toll road financing experts. It was conducted on December 13, 2016, directly with the resource persons.

The data was analysed using synthesized analysis of the DDPB and land lease hybrid financing model through a meta-ethnography method [9].

4. RESULTS AND DISCUSSION

The hybrid model in this paper integrated two financing models from two different institutions. Both the models were then combined as one system to develop a DDPB financing and land lease hybrid model, as shown in Fig. 1. Then, a process system was developed for implementing the model, which was corrected by resource persons. The model can be seen in Fig. 2.

The hybrid model, as seen in Fig. 2, can be interpreted as progressing from the pre-construction phase, to the construction phase, operational phase, and finally, the end of the concession phase (according to the number symbols listed in Fig. 2 and the symbol (..) in the interpretation description). The entire hybrid model process is described below.

4.1. Pre-Construction Phase

The government, through the state budget, allocates funds for land acquisition, where the funds are given to the Ministry of Finance through SAMI (1). However, according to experts that participated in the FGD, although this is rather clear, at this time, TRA requests TRC to temporarily provide bailouts for land acquisition, and when the funds are issued from the state budget, the bailouts are reimbursed.

According to the Financial Services Authority regulations, companies can issue bonds if they have been in operation for at least three years. Based on this regulation, regardless of

whether business entities are already listed on the stock exchange, they can register as investors in implementing a toll road section. Thus, a TRC does not need to establish a new entity or project company. Additionally, toll road work is carried out by a state and/or a regional and/or private business entity.

If there is an assignment to state-owned enterprise (SOE) that based on Presidential Regulation No. 100 of 2014 concerning the acceleration of toll road development in Sumatera and Presidential Regulation No. 117 of 2015 concerning change on Presidential Regulation No. 100 of 2014 concerning the acceleration of toll road development in Sumatera, then financing from PT. Hutama Karya (Persero) can use bonds with guarantee from Government e.g. Ministry of Finance (2a).

If there is no assignment to SOE, based on Presidential Regulation No. 38 of 2015 concerning public private partnership in the provision of infrastructure, the Government through the Ministry of Finance, provides a guarantee policy to infrastructure guarantee fund (IGF). Infrastructure guarantee fund (IGF) then conducts a recourse agreement with the contracting agency (2b).

When TRC undertakes toll road investment procedures, TRC invites new project companies (special purpose vehicles) and toll road companies (TRCs) that have operated for at least three years or already listed on stock exchange. If TRC wins the bid, TRA will conduct a concession agreement with TRC (3). Further, IGF will conduct a guarantee agreement with TRC (4). This is quite clear because the business entity has the option to provide a guarantee for the political risks it cannot handle.

Through state budget funds, the government conducts a bigger land acquisition for the desired toll road expansions (5). For instance, if the toll road width is 50 meters both ways, then the land released will increase by 50 meters, between 100–150 meters, so that it can be rented. The government must arrange for more funds for the land acquisition. Nevertheless, this needs approval from the Congress, which requires a new policy regarding land acquisition for toll roads. After the land is released, the TRC can borrow (senior debt) by issuing DDPBs in the stock market (6).

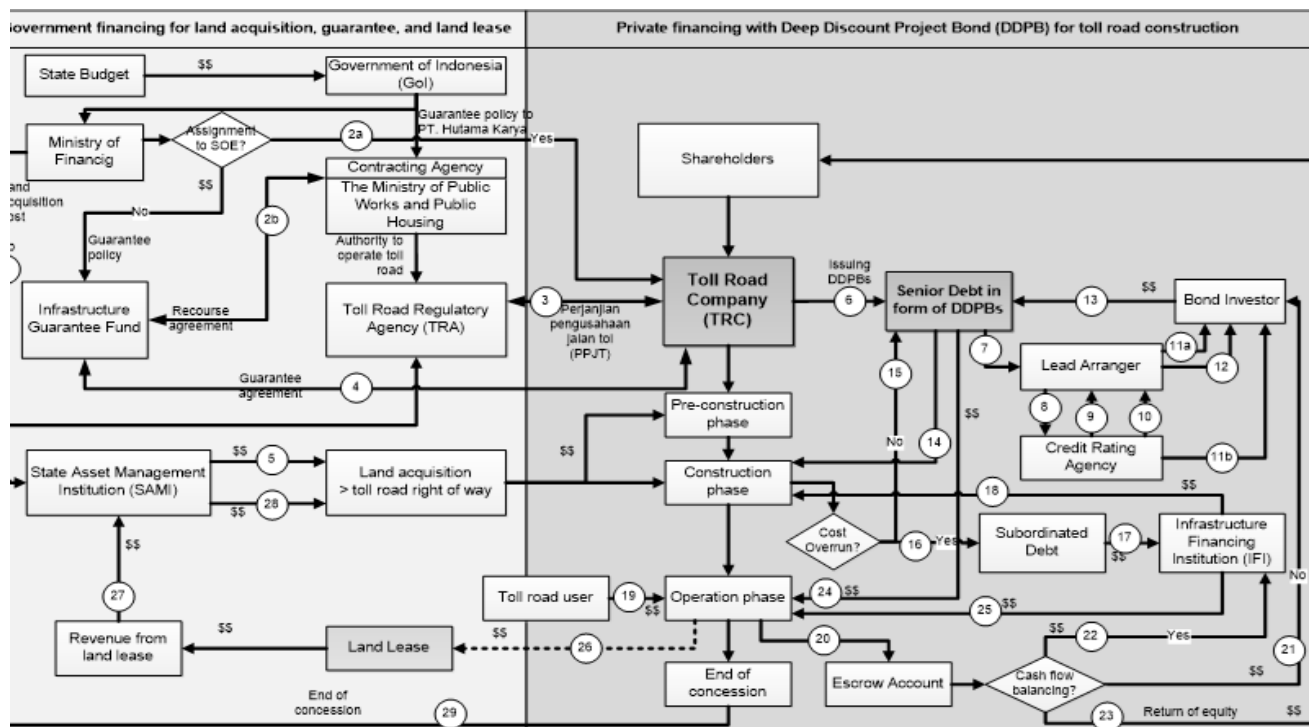


Figure 2 Mechanism of Deep Discount Project Bond (DDPB) and Land Lease Hybrid Financing Model For the DDPBs to attract investors, they are ranked by appointing a lead arranger (investment bank) (7) who then gives a project presentation that includes ratings allocated by the credit rating agency (8). According to experts, from the context of assignments to SOEs, a government guarantee is required to enhance the rating of the DDPBs when they are sent to the credit rating agency. However, for a private business entity, the rating is based on the company's work performance.

The credit rating agency does an independent study, including project risks, legal documents, and independent supervisory reports (9). It then provides the recommended DDPB credit rating (10). After receiving the credit rating, the lead arranger (investment bank) along with the credit rating agency prepares a preliminary DDPB prospectus for the market and/or DDPB investors (11a) and (11b). Then, every preliminary DDPB prospectus is tested in the market. The investment bank then issues its final DDPB prospectus and underwrites DDPBs (12). Afterwards, DDPB investors pay and/or buy DDPBs to the TRC (13).

4.2. Construction Phase

The DDPB sales results are then used to pay for the construction (14). If there is an overrun in construction costs of more than 20% above the expected costs, then subordinated debt can be raised (15). This means that the TRC issues subordinated debt (16) to the IFI by providing loans to investors (17), and the borrowing process is in line with the effective procedures at the IFI. The funds can be used to pay for construction costs (18). According to Scannella [10], this is an alternative to a payment guarantee if the investment cost is more than 20% above the construction costs.

4.3. Operational Phase

This is conducted after receiving funds from toll road users in the form of toll revenue (19). Meanwhile, to mitigate default risk to DDPB investor (senior debt) and IFI (subordinated debt), then toll road revenue has to save firstly at escrow account. At the escrow account will be divide for: (i) operation and maintenance cost; (ii) senior debt payment (DPB); (iii) subordinate debt payment (IFI) (if any) (20). After balancing of TRC cash flow, where senior debt can be paid, then TRC can start preparing DDPB debt payment to bond investor as the rule of deep discount bond or zero coupon bond (21), and then IFI debt can be paid (22). After cash flow is positive after being reduced by operation and maintenance cost, DDB debt, IFI debt, and taxes, then TRC does dividend to shareholders (23).

If possible, the business entity can opt for refinancing by re-issuing the DDPBs for expansion or additional operational costs (24). Further, refinancing can be done by obtaining loans from an IFI (25).

An excess of land released can be rented to gas pipe owners, telecommunications owners, high voltage electrical network owners, or railroad operators (26). Under the SAMI, released land that is bigger than the width of the toll road will be rented as government asset usage. According to Juričić and Brajković [6], the BLT model is one in which investors build and fund a building and then rent it for a long period to an individual or a company.

The rented land produces revenue, which is allocated to the SAMI (27). Next, the funds are used for land acquisition in local toll road segments and other toll road segments (28). This proposal is a positive side of the revenue source of SAMI. Until now, the government was focused on how land exemption funds would be provided by SAMI. Later, the assets were recorded as under SAMI.

According to Shukla et al. [7], the private sector or the government sector provides a concession to a private entity to build a facility (and possibly design it), own it, rent it to a client,

and then, in the final renting period, divert its ownership to the client. According to Hall and Aldridge [11], there are several criteria for renting land or buildings.

4.4. End of Concession

In the end, based on the concession agreement, after the concession period has finished, the toll road assets will be returned to TRA (29), which is a normative process.

Comparing the existing model with the new model (Fig. 2), there are several significant differences with respect to private party involvement, government involvement, construction costs, and land acquisition costs, as revealed in Table 1 below.

Table 1 Differences in the Existing Model and Hybrid Model

		Existing Model	Hybrid Model
1	Private Party	Requires making a new entity either with or without the cooperation of various sponsors	Not necessary to make a new entity
2	Government Party	The Ministry of Finance provides a guarantee through an infrastructure guarantee institution to cover political risks from the government.	The Ministry of Finance, provide a guarantee to the business entity to improve the credit rating when issuing DDPBs.
3	Construction Costs	Originates from commercial bank debt or financial institution debt	Originates from DDBPs, coupon will be paid at maturity.
4	Land Acquisition Costs	Originates from state budget	Not only originates from state budget but also from toll road land rent under the Public Service Agency. Government provides funding for additional land.

5. CONCLUSION

This paper has explained the process of how the DDPB and land lease hybrid model can be developed to be applied for new toll road projects in Indonesia. A significant finding of this paper is that the parent company does not need to create a new entity. It is sufficient to issue DDPBs; therefore, it does not result in expenditures in creating a consortium, which requires a significant amount of time as well. Furthermore, the government can add to its revenue through renting land along the toll road, and thus reduce the dependence on land acquisition costs from the state budget allocation limitations.

Furthermore, this hybrid model may not only be used for new toll roads but also for other infrastructure financing, for instance, toll bridge, railways, airports, or oil and gas projects. Meanwhile, this hybrid model is a financing system that complements the traditional system.

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