Asset Securitization to Address Infrastructure Financing Gap in Indonesia

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ASSET SECURITIZATION TO ADDRESS INFRASTRUCTURE FINANCING GAP IN INDONESIA

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Given the pressing challenges on infrastructure financing in Indonesia amidst the nation's low fiscal capacity, innovative financing is needed to attract more private sector financing. The paper argues that asset securitization can provide sufficient rationale and magnitude to address this issue. While there are already two infrastructure asset securitizations commenced in 2017, the setup for securitization to grow further still needs to be improved. The paper develops arguments that going forward, authorities and related parties should consider the need for an integrated strategy to further develop securitization scheme to address the infrastructure financing gap. Given the considerable available assets to securitize and funds to mobilize, providing enabling framework at the national level including in term of regulation and commercial environment therefore are utmost important to hold for this securitization initiatives.

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1. INTRODUCTION

Infrastructure is a constraint to economic growth in Indonesia. While it is unarguable that infrastructure growth is positively correlated to economic growth, productivity, and equality[3], based on World Economic Forum data, Indonesia still need to improve its infrastructure quality relatively to neighboring countries like Singapore, Malaysia, and Thailand.

One of the main challenges in Indonesia's infrastructure development is infrastructure investment financing. Due to the relatively low tax ratio compared to neighboring countries, Indonesia's government investment capacity is limited. Based on Indonesia's National Medium-Term Development Plan (RPJMN) released by Ministry of National Development Planning of Indonesia, to provide adequate infrastructure investment, Indonesia is expected to invest around US$400 billion for infrastructure development from 2015 to 2019. This need is projected based on the level of infrastructure needed for Indonesia to become a middle-income country by 2025.

To achieve this target, Government has been applying an accommodative infrastructure investment policy. Based on Ministry of Finance data, government's infrastructure investment has already increased from below 10 percent to total state expenditure in 2012 to 18,5 percent in 2018 or growing 130,9 percent in nominal level. Considering the slow growth trend of tax ratio as well as the existence of fiscal rule, such as deficit ceiling and mandatory spending, the amount of State Budget that can be allocated to infrastructure is then only around 40 percent.

Beside government, State-Owned Enterprises (SOEs) and private sector also has been deploying their resources toward infrastructure in-

[3] Based on Calderan and Serven (2007), on average, increasing infrastructure stocks by 1 standard deviation is expected to raise an economy's growth rate by 3 percentage points. Besides, infrastructure may also help to reduce income inequality by enabling the poor to access productive opportunities. Infrastructure can increase productivity by lowering transport and telecommunications costs, generate economies of scale and scope in production, and promote improvements in human capital.

vestment. In 2015 to 2019, about US$40 has been allocated by SOEs, and this amount already accounts for 80 percent of total capital investment by SOEs. Even if all financial resources were invested on infrastructure, the amount is still not enough to fill the infrastructure investment gap.

To date, Indonesia has been promoting initiatives that can further unlock private investment potential, such as by promoting Public-Private-Partnership (PPP) scheme. However, fact showed that PPP alone does not suffice the needs to unlock potential private investment for infrastructure. As quoted from PPP book by Indonesian Ministry of National Development Planning (2017), there are still many unexecuted projects with total amount of US$8 billion as of December 2016. This fact implied that PPP system itself still needs to be improved.

In addition to PPP, to further accelerate infrastructure investment, an innovative financing method needs to be explored. Financing method matters due to the characteristics of an infrastructure project, which contains high risks. These risks makes it hard for infrastructure to convince potential investors to place the funds. The paper would like to establish argument that there is a financial structure that can allocate risk more conveniently for investors and SOEs as infrastructure project owners. This will be explained in the following,

Infrastructure-related risks are distributed differently throughout the project lifetime. Usually, an infrastructure project's upfront cost is very high, because this is where the planning risks and construction risks lie. When the infrastructure starts to be operational and revenues are generated, the risks became abruptly decreased. All risks embedded has made one infrastructure project needs a specific financing method that can distribute and match the risks with type of investors optimally throughout the project lifetime. The needs to distribute these risks therefore requires an infrastructure project to be financed by project financing, and not corporate financing.

These challenges actually have been well acknowledged by Government of Indonesia. In 2017, Indonesia has given birth to an innovative financ-

ing scheme called infrastructure asset securitization. Promoted by the Government, this financing avenue has proved its ability to meet investors' appetite, by mobilizing around US$460 billion of funds to infrastructure projects in electricity and transportation sector. Add the fact that the amount almost exceeded the current size of asset-backed securities market in Indonesia, the paper argues that if developed better, the impact will be even more significant for infrastructure market in the future.

To achieve the latter, a thorough analysis on infrastructure asset securitization's enabling environment should be done. The paper argues if the current domestic environment can be made more accommodative for the financing scheme to grow, the mobilized funds could actually be bigger and deeper, in term of the investors' base. This evaluation should cover aspects such as if the regulatory environment is enough, or if there should be incentives imposed to catalyze the market in the beginning.

Based on the above objective, the paper will discuss several aspects of infrastructure asset securitization, which are: (1) Definition of Asset Securitization and the Structure of Collective Investment Contract-Asset Backed Securities (CIC-ABS), (2) Analysis of CIC ABS from Supply Side: Infrastructure SOEs' Perspective, (3) Analysis of CIC ABS from Demand Side: Investors' Perspective, and (4) Framework of National Infrastructure Asset Securitization.

2. LITERATURE REVIEW

While there are many literatures exploring asset-backed securities for housing sector in the world, there has been almost no literature concerning infrastructure asset securitization especially in Asia. Some that are considered most relevant, agreed to the paper's premise that asset securitization is potential in addressing infrastructure investment gap.

Giddy (2000), for example, emphasized that Asian countries can benefit from undertaking asset securitization. It argues that asset securitization can give benefit to Asian countries as far as transparency and

stage-by-stage processes are concerned. Some of the benefits are (i) accelerating development of capital market due to the existence of high quality instrument in the market, (ii) giving more alternative source of funds for companies that are rapidly growing but capitally constrained, as well as (iii) creating financing potential for infrastructure.

It also explained that Asian countries are in position for taking the above potential benefits due to two main reasons. First is securitization can create lower cost of financing, and second is, for the financial institutions, securitization can be alternative of financing due to the dearth of risk management tools they are facing. The paper also mentioned some of the potential financial assets example for securitization that can be used by Asian countries, such as toll road and electricity-related revenues.

Next, Regan (2017) also stated that securitization can be an alternative for infrastructure financing. This is especially for financial institutions that wants to recycle their loan and attract potential funds from wider investor's base, including institutional investors such as pension funds and insurance companies. It also further defined type of assets that can be securitized. Examples of the assets are those that has characteristics such as (i) exposed with no or less competition, (ii) not imposed to change of tariff risk, and (iii) has revenue stream that are both stable and indexed regularly (such as by consumer price index), (iv) has small variable cost, and those which (iv) has low demand elasticity. For the characteristics number (iii) above, in Asia region on 2012, there was an issuance of notes indexed by consumer price (Project Finance International 2015).

On the other hand, it also imposed a potential challenge which is competition with other financial instrument like bonds. It stated that securitization is still far from being a substitute for bonds market that offers a more liquid and flexible recycling and diversification alternatives. In term of investors, Della Croce and Gatti (2014) also stated that infrastructure assets are considered eligible for investors to diversify their portfolio of investment. This especially is the case in a mixed portfolio.

Besides, Dexia (2007) said that securitization has been used to finance credit that are enhanced by bonds that are issued to finance economic

infrastructure projects including electricity. Romero-Torres, Bathia, and Surall (2017) used India as case study in highlighting how Asian country like India can utilize securitization as tool for infrastructure financing acceleration. It assess comprehensively from infrastructure financing gap up to enabling environment in the country to undertake optimally securitization scheme for infrastructure.

Next, Kuri-Brena (2008) stated that Mexico and India are example of emerging economies that has also extended the use of securitizations from only mortgage-backed ones to infrastructure following. The latter initiative followed the ambitious infrastructure development agenda set by the Government of the country. The trend of infrastructure growth after the initiative become more positive and further increased the emergence of wider type of assets to be securitized.

It also highlighted the presence of legal framework in the level of Act, for instance, that also helped the securitization scheme to grow. The Act provided the legal framework governing securitization trusts and their transactions. The provisions of this act were legally binding for all securitization transactions. This angle will be used in this paper in assessing the needed regulatory environment for infrastructure asset securitizations to grow.

3. METHODOLOGY OF STUDY

This paper adopts two methods to support the analysis and recommendation which are quantitative and qualitative method. Quantitative method is used to assess the impact of infrastructure asset securitization to the financial condition of an infrastructure company. In this paper, a particular SOE that is used as case study. To define the cash flow pattern to and from the financial statement of the infrastructure SOE, so we can calculate the net financial impact, we use valuation model that accommodates the CIC-ABS structure.

Furthermore, to compute the effect of the recycling of the securitized cash flow into new infrastructure, the paper will run a simple income

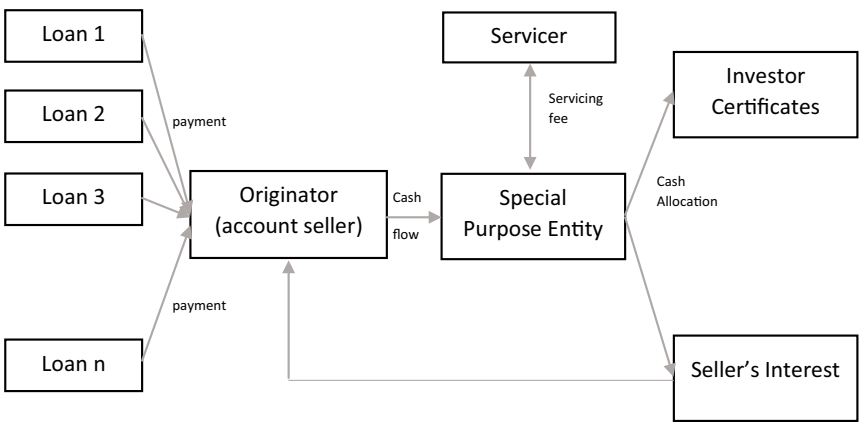
statement forecasting model using predetermined assumptions. Parsimonious principle is hold because the main purpose of this paper is to illustrate an ideal picture of asset securitization policies so it can be used to improve both the productivity of financial assets and increase infrastructure asset stock.

3.1 Discounted Cash Flow Model

As an introduction, securitization is a process of transforming illiquid assets that can be in the form of receivables and so on into securities through a process namely financial engineering. The basic elements for asset securitization is illustrated below on Figure 1.

At a high level, the process generally consists of institutions that owns the receivables, which in this case is infrastructure companies, that sold to a securitization vehicle (typically a trust). In Indonesia where trust system is yet to be aplicable, this role of this vehicle is done by a collective investment trust (CIC), that is why it is called CIC-ABS. The CIC ABS packages the receivables and sells certificates to investors. The investor certificates are generally issued with senior structure, meaning it holds legal claim to the borrower's assets above all obligations.

Figure 1. Basic Elements of Asset Securitization



Source: Zhang, et al. (2011)

It can be seen in Figure 1 that cash flows involved will have a degree of impact to all relevant parties. The expected cash flows and actual cash flows will reflect the funding cost and profitability that may as well be affected by fluctuation risk factors. While a cash flow maybe useful to understand how to project cash flow and identify key affecting variables, the paper will not focus on that. Instead, it will be assumed to be already known, with almost zero market risks. This is because the paper aim is rather to know whether securitization can be used as tools to make more productive asset and liability management strategy, therefore it identifies the market view of securitization as well and will not heavily discuss the pricing part.

Therefore, from several steps included to price a CIC ABS which are account-level data processing, analysis, and modeling and so on, creating securitization pools, allocating cash flows, stimulating market states (Zhang, et al., 2011), we will jump into CIC ABS valuation.

Valuation will be done in a simplified manner, which is by discounting the cash flow with associated risk factors. Ideally there are many risk factors can be included such as probability of default (PD), charge-off rate, principal payment rate, and so on. However, for simplicity, the associated discount factors used in this paper are only the coupon rate. The discounted cash flow formula is derived from the future value formula for calculating the time value of money and compounding returns as follows.

$$D\ C\ F\ \ \frac{C\ F}{(1+r\ ^{1}} + \frac{C\ F}{(1+r\ ^{1}} + \cdots + \frac{C\ F}{(1+r\ ^{n}}$$

where

DPV is the discounted present value of the future cash flow (FV);

FV is the nominal value of a cash flow amount in a future period;

r is the interest rate or discount rate, which reflects the cost of tying up capital;

n is the time in years before the future cash flow occurs.

Where multiple cash flows in multiple time periods are discounted, the total value for each of the cash flows will be summed as follows:

$$DPV = \sum_{t=0}^{N} \frac{FV_t}{(1+r)^t}$$

The above formula assumes that the interest rate remains constant throughout the period of securitization.

3.2 Income Statement Forecasting

Income statement forecasting will be used to form few scenarios in analyzing the effect of securitization to the profitability as one aspect of financial condition of the infrastructure companies. The method used is macro approach, which is using the average of data history and compare it to the baseline in industry level. If the number does not deviate very much from the industry, the number will be used for forecasting.

- Revenue is assumed to have linear trend with growth rate in the securitization period equals to the average growth rate of period 2012-2016.
- Operating, interest, tax, and depreciation expense are assumed to be a percentage of revenue. While operating expense is a percentage of sales, interest, tax, and depreciation will be a stable percentage to the earnings before interest, tax, and depreciation. The percentage will be derived from 2012-2016 percentage, assuming there is no volatile components on the operating expense, no efficiency, and so on.
- Additional sales due to securitization proceeds that increases sales will be computed using ratio of asset productivity, which is sales to asset ratio.

3.3 Qualitative Method

In-depth interviews, focus group discussion, and cross-country benchmarking are used to explore the qualitative part of this research. For the benchmarking countries, the paper is based by result of in-depth interviews[4] with several relevant parties of a benchmarking country. The example for asset securitization is Australia and Malaysia as the most relevant and convenient sample. Appendix 1 can show the list of questions that are being asked to the respective parties in Australia.

Beside in-depth interview, a Focus Group Discussion was also held to potential stakeholders from originators, local pension and insurances funds, foreign pension and insurances funds, local banks, foreign banks, local lawyers, and State-Owned Securities companies. Focus Group Discussion that was done for this study was basically in the form of gathering people from similar backgrounds, for example, one FGD for financial investors, one FGD for infrastructure SOEs, were gathered to discuss a specific topic of asset securitization. The group of participants is guided by a moderator that introduces topics for discussion and helps the group to participate in a lively and natural discussion amongst themselves.

4. ANALYSIS

4.1 Potential Benefit and Risks of Asset Securitization for Infrastructure SOEs

With its unique structure and characteristics, there are many benefits one infrastructure-related SOE can get from securitizing their revenue-generating illiquid assets. The latest is important because increased financing ability can help SOEs business expansion and acceleration and accelerate the nation's infrastructure development.

[4] In-depth interviewing is a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program, or situation (Boyce and Neale, 2006).

The first benefit is to optimize the capital investment potential from SOES' fixed assets and brownfield[5] projects. Having been in operation for long time, infrastructure-related SOEs must have many fixed assets in their balance sheet that generate stable and rising investment. These assets include new infrastructure fixed assets such as toll road, ports, that is already in operation also reflects potential of securitization. By better identifying which assets that can reflect this potential, such as those that have a steady and growing cash flow and not entitled to any third parties such as creditors, SOEs can have a more sophisticated asset management. The latter is in comparison with conventional type of asset management that is very cash basis, for instance.

Next benefit is it somewhat pushes infrastructure-related SOEs to have a very efficient business operation by always exploring new opportunities for investment. This is because securitization carries a cost of fund risk if the sale proceeds are not recycled timely and properly. By securitizing its financial assets, SOEs can get upfront cash instead of years later when the assets are a lot more mature[6] and accumulating enough money to be used to be spent on capital investment. This scheme then can accelerate the whole cycle of business. However, this will only apply if a SOE has a project that is ready to invest on. If there are no project ready while proceeds is already received in cash, there is a risk of negative carry. The latter is a condition where the return of investment on this cash is lower than the interest rate paid to investors as result of ABS issuance. This especially matters because the company usually stores the cash in a time deposit form before used which normally cost them the negative difference between the time deposit rate and the interest payment to ABS investors.

The third benefit is through obtaining financing for bankable but not financially viable projects. As the arms' length of the Government, SOEs

[5] Brownfield project refers to projects that already established assets that needs improvement.

[6] Usually refers to level when an infrastructure assets only needs basic maintenance to operate.

is often tasked to handle high-risk development projects that have characteristics such as low financial feasibility. With low financial feasibility, it will be difficult for infrastructure SOEs to get financing from external parties even through conventional methods such as bank financing. It is less likely for third party to be willing to bear such financial feasibility risks even with higher interest premium on investment offered. In this case, securitization can be an alternative financing avenue either through full financing or increasing gearing ratios of the projects.

However, there are at least 5 (five) aspects one SOE should consider before choosing securitization as a potential scheme to address the needs to accelerate their infrastructure development agenda which are:

The existence of a healthy balance sheet. This should be defined as sustainability of the SOE business. While there the indicators can vary from different point of view, there are some generic guidance such as financial performance. Financial health can be judged for example by looking at profitability, cash flow, liquidity, and leverage.

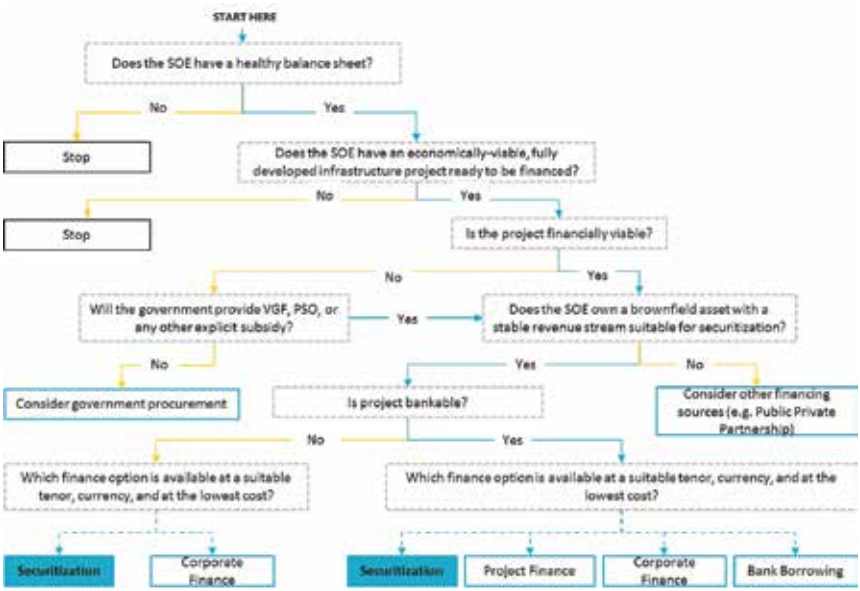
The existence of an economically-viable, fully developed infrastructure project ready to be financed. There are two elements that SOEs need to stress here which is criteria of economic viability as well as projects that is ready to be offered in financial terms. Economic viability means that the expected benefits to society are greater than the expected costs while the latter means that the project has all feasibility assessments prepared and therefore ready to be transacted, procured, or signed as a contract (PPP book, 2017).

The existence of a brownfield asset with a stable revenue stream suitable for securitization. This means that SOEs have to make sure that their identified-as-potential assets have to be eligible by law and regulation for securitization. This would refer to the set of eligible financial assets as set by Indonesian Financial Services Authority Regulation No. IX.K.1 2008 as explained earlier in this chapter. Further elaboration on examples of this asset for the context of infrastructure-related SOEs will be done in the following subchapter.

The existence of bankable projects to be funded. *Bankability* means that investors are willing to bear the risks associated with the revenues and costs at the expected rate of return on investment.

The existence of comparable financing instruments to conclude if the cost for issuing CIC-ABS is the best value for money. This can be judged by assessing the financing instruments in term of tenor, currency, and at the cost to issue one. The latter can include not only interest payment but also additional fees such as commissions etc.

Figure 2. Decision Making Process for SOEs in Conducting Securitization



Source: AIPEG (2018)

4.2 Potential SOE Assets to Securitize

As explained before, if SOEs are to conduct securitization, one of the most important condition is that the SOEs must have an eligible financial asset. In term of infrastructure-related SOEs, below data can show

that Infrastructure SOEs in Indonesia actually have a number of commercial assets which generate a stable and growing cash flow that is potential to be securitized. Below are examples of some big infrastructure SOEs' assets. The selection of the SOEs refers to Indonesia's Committee for Acceleration of Priority Infrastructure (KPPIP)'s priority SOEs for national infrastructure securitization initiative (2016). Aside from KPPIP, other explanation for choosing these SOEs are because they are serving the strategic sectors as explicated by the RPJMN.

4.2.1 PT Jasa Marga's Jagorawi toll road

Jagorawi toll road is one example of a highly mature infrastructure asset in terms of high margin on operating revenues, low operating expenses, and cash flow stability in the last five years. It is fully owned by PT Jasa Marga with 59 km length and very long concession period until 2044.

As of the financial performance of Jagorawi toll road section, it can be seen from figure 3 below that Jagorawi toll road has historical revenue of IDR 429 to 697 trillion per year from 2011-2016 with a continuously growing number. The growth of operational expenses of the Jagorawi toll is also very low at an average of 6.3 percent per year from 2012 to 2016 that makes operating profit margin from 2012-2016 of the Jagorawi toll road is also higher than PT Jasa Marga's total margin of 40.9 percent. The traffic of this section of toll road also has been stable and always growing in the 2011-2016 period from 170 thousands of cars to 208 thousands of cars.

Figure 3. Jagorawi Toll Road Section Revenue 2011–2016

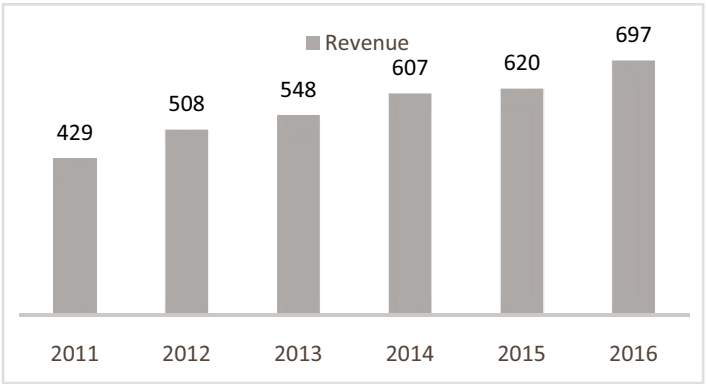
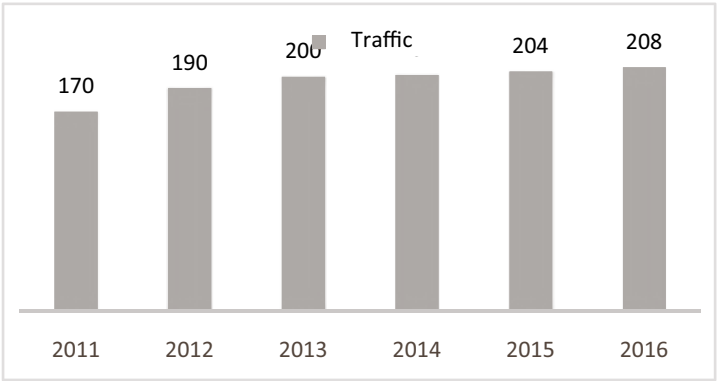


Figure 4. Jagorawi Toll Road Section Traffic 2011–2016



Source: PT Jasa Marga

4.2.2 Cash flow related with PT Angkasa Pura II

PT Angkasa Pura II is a SOE engaged in airport services business handling western Indonesia region. There are 13 airports currently operating under PT Angkasa Pura II's management which consist of few major airports such as Soekarno-Hatta and Kuala Namu International Airport.

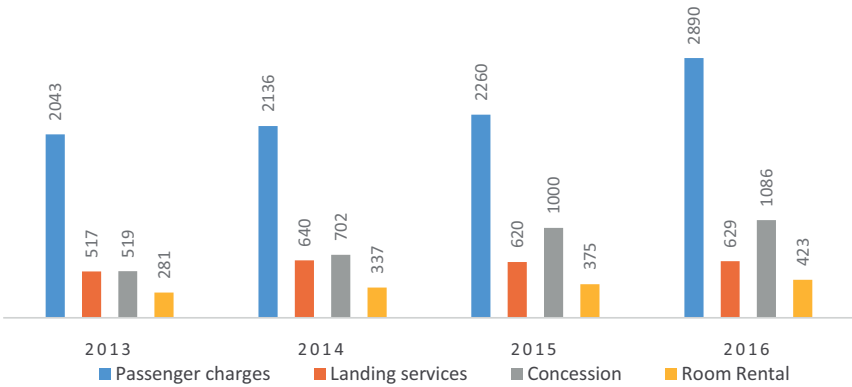
PT Angkasa Pura II has 4 (four) kinds of stable and growing cash flows. These cash flows are related with passenger and aircraft movements.

Those related with passenger movement are concession fees and room rental revenues while the other category consists of landing services fees and Passenger Service Charges (PSC). From PT Angkasa Pura II's total revenue, the revenue from passenger movement or aeronautical services such as PSC and landing services fees holds significant portion of 61 percent, while the revenue from non-aeronautical services which are concession fees and room rental hold a portion of 39 percent.

Besides holding the largest proportion of its operating income, the PSC also generates a steady and growing cash flows for PT Angkasa Pura II. This can be seen from Figure 5 that as revenue of PSC has been continuously increasing from 2013 to 2016 from IDR 2.043 Trillion until IDR 2.89 Trillion. In average, the PSC revenue accounted for IDR 2.332 Trillion per year. From the growth side, PSC has increased rapidly from 4.5 percent in 2014 to 27.9 percent in 2016 on year on year term. The increased growth of PSC in 2016 is in line with increase in tariffs. In 2017 data, PSC revenue is expected to increase following full operation of Soekarno Hatta's Terminal 3 Ultimate.

In addition to PSC, landing services fees, concession fees, and room rental revenues also demonstrate great securitization potential with average cash flows of IDR 601.5 Trillion, IDR 826.75 Trillion, and IDR 0.354 Trillion per year respectively during the year of 2013-2016. Even if these four types of cash flows were only securitized by 50%, PT Angkasa Pura II will still earn around IDR 1.5 T.

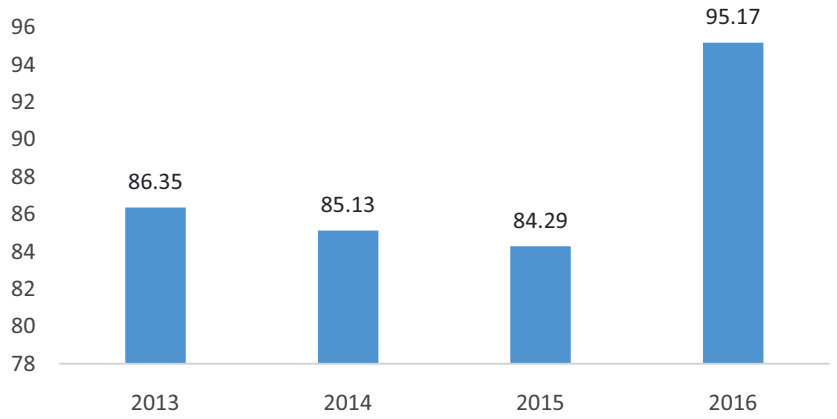
Figure 5. PT Angkasa Pura 2013–2016 (in IDR Billion)
Cash Flow Trends



Source: Ministry of SOEs, processed

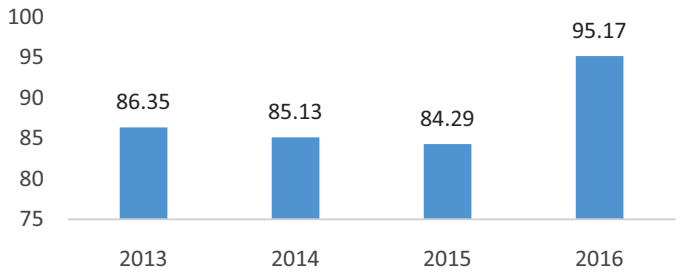
Although there was tariff's increase, the positive trend in revenues from PSC in general has been in line with the number of underlying passengers and aircraft's movement. As can be seen in the figure 6 and Y, 4-year Compounded Annual Growth Rate (CAGR) of the two indicators are 10.2 and 13.2 percent, respectively, both for domestic and international routes. The largest growth mainly occurred in 2016 where it recorded annual growth of 12.9 and 15.9 percent respectively.

Figure 6. PT Angkasa Pura II's Passenger Movement (in million) 2013–2016



Source: Ministry of SOE (2017)

Figure 7. PT Angkasa Pura II's Aircraft Movement (in million) 2013–2016



Source: Ministry of SOE (2017)

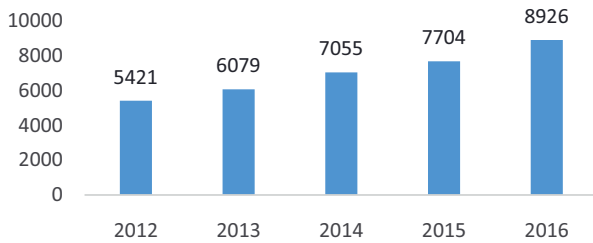
4.2.3 Cash flows related with PT Pelabuhan Indonesia (Pelindo) II

PT Pelindo II is a SOE engaged in the development and operation of ports business. The main type of services PT Pelindo II delivers in seaports operation and management are for example ship and cargo services. Based on PT Pelindo II (2017), the ports' main income source or revenue

streams is the terminal operation. Terminal is one of the main asset of ports. Terminal operation in ports generates revenue through loading and unloading of cargos or containers and goods (throughputs). One of the driving factor of the throughput is domestic economy and the infrastructure readiness of the terminal. Therefore, with currently growing domestic economy and infrastructure getting more developed, revenue from terminal is a potential asset for securitization.

With PT Pelindo II's revenues of IDR 8.26 trillion as shown in Figure 8, PT Pelindo II could securitize as much as PT PLN's. In addition to strong cash flow in total, PT Pelindo II's revenue also grew continuously every year by 15.9 percent (year on year) in 2016 with CAGR of 13.3 percent (year on year) from 2012 to 2016 in average.

Figure 8. Revenue Trend of PT Pelindo II in 2012–2016 (in IDR billion)



Source: PT Pelindo II

Other than the potential in terms of its stable cash flow in the main revenue, PT Pelindo II also has the potential to absorb foreign investors' funds since most of its revenue components are denominated in foreign currencies such as the US dollar.

4.2.4 Cash flows related with PT PLN

PT PLN is a State-Owned Enterprise engaged in the production, transmission, and distribution of electricity in Indonesia. PT PLN has some potential cash flow for securitization.

One of the potential cash flows is the securitization of PT PLN's business receivables from certain customers such as (a) Electricity sales to industrial customer group of (I3) amounting to IDR4.5 trillion per month, and (b) Electricity sales to industrial customer group of (I4) amounting to IDR1.2 trillion per month.

The structure of the revenue based on customer's type enables PT PLN to structure a securitization on this basis. As an illustration, revenues from electricity distribution on Bali area only, for certain small household customer's type of 1.2 million people, the revenue that PT PLN gets per year is around IDR5.5 trillion with collection period up to 25 days. This big amount reflects the potential capital investment from securitization if PT PLN can better identify its cash flows. For instance, PT PLN could divide the cashflows by the above types and set aside the most stable and growing ones to be securitized.

Furthermore, the potential cash flow is revenue securitization from electricity power sales from the Independent Power Producer (SPV) to PT PLN, whereby subsidiaries of PT PLN (Persero) become minority shareholders in the IPP. As an illustration, the revenue generated by PT PLN's subsidiary the PT Indonesia Power from Suralaya Powerplant which is one of the most mature powerplant supplying electricity for the biggest island in Indonesia, Java island, is IDR18.7 trillion per year. The Suralaya Powerplant is operating since 1985 with one refurbishment done in 2012. The Suralaya Powerplant is the largest powerplant in ASEAN with 20 percent electricity supply nationally. The estimated revenues from Suralaya PLTU reached up to IDR18,7 trillion per year. This PLTU is owned by PT PLN's subsidiary, PT Indonesia Power, and located in Cilegon, Banten on an area of 241 Ha.

4.3 Potential Funds to Mobilize

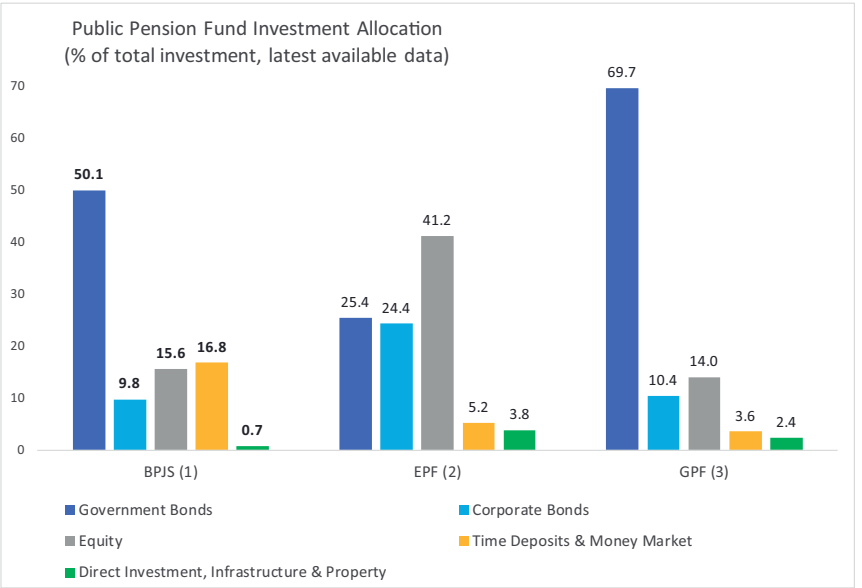
As the largest lender in Indonesia with asset size that accounts for more than 30 percent of GDP, which means these instruments are the most used ones by corporates, banks may be considered as the main target

investor for an infrastructure-related CIC ABS. However, there is a challenge in mobilizing bank loans for infrastructure-related ABS. Besides naturally it is dominated by third party funds in the form of short term deposits that in average matures in less than a year, banks in Indonesia are discouraged by regulation to conduct long term investment. This is reflected in the existence of capital charge for investing in one.

Besides, banks are also not entitled to lend too much to a borrower given the Single Lending Limit (SLL) rule. The rule requires banks to have a ceiling of lending to one borrower usually 20 percent of total capital for single company. Using some examples of big banks in Indonesia that has total capital around IDR87 trillion, the SLL is IDR17 trillion. As an illustration, in Indonesia, average funding required for 1.000 MW power plant project is IDR17 trillion.

Unlike banks, pension funds and insurances have long-term liabilities. Therefore, with current Indonesia's demographic profile which will continue to record surpluses in the coming years, pension funds and insurances are the more suitable investors to target for this long tenure infrastructure-related CIC ABS. In addition, with the newly established Indonesian Social Security Agency (Badan Penyelenggara Jaminan Sosial) through Government Regulation number 19 of 2016 that runs the integrated and mandatory social security system, the pool of long term funds that is in line with Indonesia's demographic profile will be able to grow a lot rapidly in the coming years. These facts only emphasize more the capacity of this fund to become a great bank loans' alternatives.

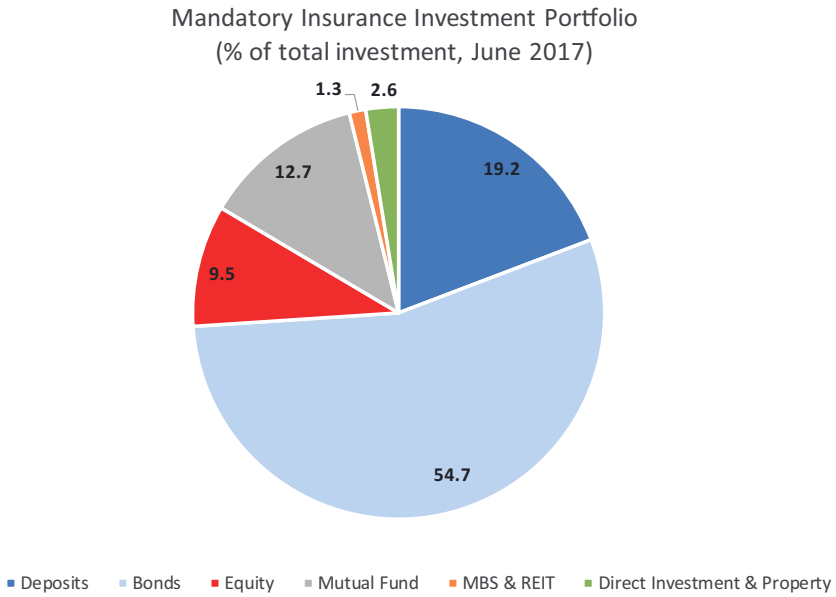
Figure 9. The Allocation of Public Pension Fund Assets in Several Countries



Source: OJK, EPF Malaysia, GPF Thailand

Figure 9 illustrates that the allocation of public sector pension funds in Indonesia is heavily invested on short term instruments. This allocation indicates the existence of asset and liability mismatch in Indonesian public sector life insurance. 16.8 percent of BPJS fund was reported placed on time deposits and money market instruments. This portion is very large compared to the regional average. The Employee Provident Fund (EPF) Malaysia and Government Provident Fund (GPF) Thailand, for instance, only allocated 5.2 and 3.6 percent respectively to these short-term instruments. This reallocation of about 10 percent, which is the difference itself between Indonesian and region's allocation, is an opportunity to be mobilized to longer term instruments such as CIC ABS.

Figure 10. The Allocation of Public Sector Life Insurance Asset in Indonesia



Source: Indonesian Financial Services Authority (the calculation includes the investment portfolio of PT ASABRI[7], PT Taspen[8], PT Jasa Raharja[9])

Heavy allocation on time deposits is also experienced by public sector life insurances in Indonesia. As much as 19,2 percent of the life insurances funds is placed in time deposits. This amount is considered large compared to placements in other instruments such as stocks and mutual funds which amounted to only 9,5 and 12,7 percent respectively. Besides, life insurance should typically have long liabilities and should be treated differently with general insurances or health insurances that has a short-term obligation to pay.

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[7] Indonesia's Savings and Insurances Company for Armed Forces supervised by Indonesan Defense Ministry.

[8] Indonesia's Old Age Savings for Civil Servants supervised by Indonesian Finance Ministry.

[9] Indonesia's Insurance Company for Traffic Accident supervised by Indonesian Transportation Ministry.

In addition to the high potential growth of long term funds in Indonesia and the indicated asset and liability mismatch in its portfolio of investment, the rationale for investors as explicated in the previous subchapter therefore really emphasizes the potential of the future accumulated asset to be placed in instruments like CIC ABS.

4.4 The Risk of Asset Securitization for Infrastructure SOEs

4.4.1 Risk of remaining cash flow

If some of the best, stable, and high-growth financial assets of the infrastructure SOEs are being securitized, infrastructure SOEs then need to consider the remaining cash flows in their balance sheets. The remaining cash flows for instance should be kept in a level that can at least serve as a buffer for operational costs and other matters related to business continuity.

However, securitizing the best assets should not necessarily translate into leaving the company with bad assets. This paradigm is wrong if SOEs are to follow the guidance to do securitization as explicated in early chapter that there should be projects that are ready to be funded before executing the securitization. This is the part where the securitization of asset is translated into recycling of asset which therefore will not leave the company with bad assets, rather good, new assets.

The previous becomes a concern including in Indonesia. Based on PT Sarana Multigriya Finansial (2017), commercial banks in Indonesia are not very eager to securitize their mortgage assets. It is due to a perception that securitization may lessen their assets–especially the good quality ones. With higher asset growth being targeted as one of the key performance indicators of commercial banks (as explicated in Indonesian Banking Architecture), the perception result in reluctance in doing securitization. This perception reflects the lack of education among commercial banks about securitization.

Regarding the latter, it is not always the case that securitization can lessen banks' asset. Securitization is rather meant to recycle the asset, than

to sell the asset. The objective, however, can be achieved only if banks use the securitization proceeds to fund quality assets. In other words, there needs to be projects that are ready to be invested in, before securitization is conducted. The fast turnover of the securitized assets to build new ones will be the main indicator to determine if a securitization is successful in increasing company's investment capacity. The term recycling of asset was coined and adopted by Australian Government as part of Australian Government's strategic initiatives called "Asset Recycling Initiatives" that can be seen in last chapter.

4.4.2 Risk of return on reinvestment

As explained above, one of the most important parts of a successful asset securitization scheme is the quality of the use of proceeds from asset securitization. The proceeds of asset securitization must be invested in a good project with sufficient investment returns so that the opportunity cost of selling old project cash flows is compensated by the new project returns.

As stated above, not all projects have financial feasibility, so Infrastructure SOEs must be more careful in choosing the project to maintain financial condition of Infrastructure SOEs from declining. Therefore, for SOE's green field projects or projects that are assigned by the Government, if it wants to be financed by using securitization proceeds, the project must have an estimated rate of return that is at least equal to the cost of finance. Infrastructure SOEs also need to identify and implement risk mitigation efforts so that the risk of project failure from any aspect can be minimized.

4.5 Empirical Findings on Securitization Impact to SOEs Financial Performance

To assess the impact of financial asset securitization, a cash flow model of securitization will be used to determine how much cash will be received

by SOEs throughout securitization period. The latter means calculating how much up-front cash will be received and how it then will change the cash flow statement or balance sheet of SOEs in 5 years time (as study case). The amount will change SOEs financial condition in two ways, by deducting fixed amount of cashflow, which will be called, scenario 1. And by the adding the return of new investment.

To make the cash flow model, we will first determine how much financial assets will be securitized. From here on, the example of Indonesia Power's securitization will be used. This transaction has securitized IDR4 trillion of Indonesia Power's powerplant-sourced future receivable with coupon rate 8,25 percent per annum and paid quarterly for 5 years. Beside these figures, variable cost related to the CIC ABS has to be calculated as well because the cash flow model will be a discounted one. The variable costs are as follows.

Table 1. Variable Cost for Issuing CIC ABS in Indonesan Stock Exchange

Variable Cost	Rate	Payment	Basis
Investment Manager Fee	0,20%	per year	outstanding
Brokers Fee	0,09%	per year	outstanding
Servicing Fee	0,10%	per 3 months	installment
KSEI Payment	10.000.000	per 3 months	-
Credit Enhancement Fee	0,08%	per year	outstanding

After knowing the amount that will be deducted, we then will model the net cash flow received by investors, which is net cash flow received by investors times a discounting factor. Each 20 payments made will be discounted individually to present time or time when the CIC ABS is issued. The formula used is as follows.

$$CF = \sum_{t=n}^{1} \frac{(NCF_{t+n})}{(1+\frac{r}{4})^n}$$

Details

CF = Total Cash Flow received by Originator SOEs (IP) at present time or when CIC ABS is issued

NCF = Cash flow received by Investors at time t+n deducted by whatever cost associated (in this case costs as detailed in Table X)

r = Coupon rate

n = How many coupon payments are made to investors (in this case 20 payments because the coupon is paid every quarter)

Using the model above, a cash flow model of 20 point of time (column A) can be generated. The model began with calculating the gross payment made to investors (column B). This is basically the amount of sales that is being securitized and passed through to investors. As the payment is made by PT PLN and not end customers, the amount in the column B will be transferred from PLN account to CIC ABS's account directly.

After detailing this amount, we then calculate the variable cost which is calculated based on Table 1 above and deduct it to the gross payment to get net cash flow received by investors as specified in Column E. Each point in Column E than will be the in Formula A above that will be discounted to present time. The sum of the present value of each data point in Column E will be in Column C and row F. With a 15 percent of tax (Row I) to the interest income or total discount amount which is gotten from total securitized cash flow of IDR4 trillion deducted by row F as the price of the CIC ABS (Row H), the net that will be received by PT IP is IDR3,092 trillion (Row J).

Table 2. Cash Flow Model of 5-Year ABS with Coupon 8,25% and Quarterly Payment

Time	Gross Payment	Present Value of Net Cash Flow	Variable Cost	Net Cash Flow
A	B	C	D	E
0	0	0	0	0
1	200.000.000.000	191.965.707.287	4.075.000.000	195.925.000.000
2	200.000.000.000	188.264.023.289	3.890.000.000	196.110.000.000
3	200.000.000.000	184.633.554.735	3.705.000.000	196.295.000.000
4	200.000.000.000	181.072.935.016	3.520.000.000	196.480.000.000
5	200.000.000.000	177.580.823.672	3.335.000.000	196.665.000.000
6	200.000.000.000	174.155.905.896	3.150.000.000	196.850.000.000
7	200.000.000.000	170.796.892.045	2.965.000.000	197.035.000.000
8	200.000.000.000	167.502.517.158	2.780.000.000	197.220.000.000
9	200.000.000.000	164.271.540.486	2.595.000.000	197.405.000.000
10	200.000.000.000	161.102.745.028	2.410.000.000	197.590.000.000
11	200.000.000.000	157.994.937.084	2.225.000.000	197.775.000.000
12	200.000.000.000	154.946.945.801	2.040.000.000	197.960.000.000
13	200.000.000.000	151.957.622.747	1.855.000.000	198.145.000.000
14	200.000.000.000	149.025.841.474	1.670.000.000	198.330.000.000
15	200.000.000.000	146.150.497.105	1.485.000.000	198.515.000.000
16	200.000.000.000	143.330.505.919	1.300.000.000	198.700.000.000
17	200.000.000.000	140.564.804.947	1.115.000.000	198.885.000.000
18	200.000.000.000	137.852.351.580	930.000.000	199.070.000.000
19	200.000.000.000	135.192.123.172	745.000.000	199.255.000.000
20	200.000.000.000	132.583.116.668	560.000.000	199.440.000.000
Total Received by IP before tax		3.210.945.391.108		**F**
Total Securitized Cash Flow		4.000.000.000.000		**G**
Interest Income (G-F)		789.054.608.892		**H**
Tax (15% x H)		118.358.191.334		**I**
Total Received by IP After Tax		3.092.587.199.774		**J**

Source: Author's calculation

Using column B and row J as factor to model the effect of the securitization to the financial condition of PT IP, we then will get Table 3. To build the financial model, we first put the current data on time T or column T=0. The source of this data is PT IP (2017). Using the past

datas, we then make assumptions on 3 things for simplification. First is sales growth equal to 3,46% annually. We have derived from the past 4 years (2012-2016) of PT IP's sales growth to compute the growth in the next five years or as long as the securitization occurs. The rest of the assumptions which are operating cost to sales ratio (82,86%), Interest Tax and Depreciation to EBITDA ratio (70%), and Sales to Asset ratio (65,44%) using the same method. Specifically for Sales to Asset ratio, which is the ratio used to determine the productivity of asset, or how much revenue increase if one add more assets, the past data used is only 2012-2014 or the year before the asset revaluation that is considered the "baseline" years.

After we get the financial model for "Before Securitization", we then calculate the first round effect of securitization, which is the decrease in sales due to particular assets that are being securitized. This amount is generated from deducting the forcasted sales by amount of securitized cash flow per year which is IDR1 trillion in this case. Besides, we put operationg cost to equal to the operating cost before the securitization, the reason is the PT IP's cost will still incure even for the cash flow part that is already sold to investors. The effect of the securitization in this first round is reducing the net earnings on year 1 until the end of securitization period.

The next financial model is by elaborating the recycling part. The cash received by PT IP as generated in Table 3 will then be considered as additional cash flow got in the beginning of T=1. Assuming the Sales to Asset ratio and the time needed for building the extension of the PLTU Suralaya powerplant is about one year, in T=2, the additional cash flow can turn into percentage of sales in T=2. The T=3, 4, and 5 will be projected using percentage sales method. The effect of recycling the securitized cash flow is then increasing the net earnings of the company from T=2 onward.

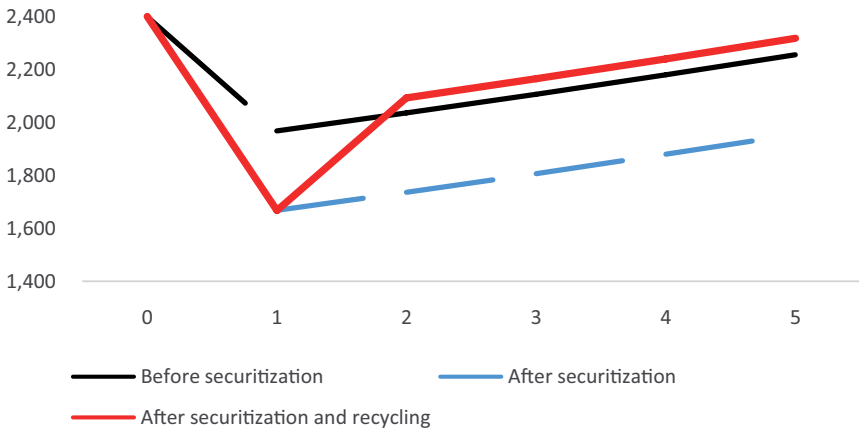
Table 3. Effect of Securitization to PT IP's Asset (IDR Billion)

Before securitization	T=0	T=1	T=2	T=3	T=4	T=5
Sales	37.000	38.282	39.609	40.981	42.402	43.871
Operating cost	29.000	31.722	32.821	33.959	35.136	36.353
EBITDA	8.000	6.560	6.787	7.023	7.266	7.518
ITDA	5.600	4.592	4.751	4.916	5.086	5.262
Net Earnings	2.400	1.968	2.036	2.107	2.180	2.255
After securitization (1st round)	T=0	T=1	T=2	T=3	T=4	T=5
Sales	37.000	37.282	38.609	39.981	41.402	42.871
Operating cost	29.000	31.722	32.821	33.959	35.136	36.353
EBITDA	8.000	5.560	5.787	6.023	6.266	6.518
ITDA	5.600	3.892	4.051	4.216	4.386	4.562
Net Earnings	2.400	1.668	1.736	1.807	1.880	1.955
After securitization (2nd round: recycling)	T=0	T=1	T=2	T=3	T=4	T=5
Sales	37.000	37.282	40.710	42.120	43.580	45.090
Operating cost	29.000	31.722	33.734	34.903	36.112	37.364
EBITDA	8.000	5.560	6.976	7.218	7.468	7.727
ITDA	5.600	3.892	4.883	5.052	5.228	5.409
Net Earnings	2.400	1.668	2.093	2.165	2.240	2.318

Sourcee: PT IP (2017), author's calculation

If we put it in chart to compare, it can be seen from Figure 11 below that the length of recycling will determine the effectiveness of securitization not only in building more infrastructure assets but also in keeping the financial condition of the SOEs healthy.

Figure 11. Effect of Securitization and Asset Recycling



Source: PT IP, author's calculation

4.6 Challenges when Investing in CIC ABS

4.6.1 Financial sector regulation issues

There are several regulations that reduce the flexibility of investment allocation. First, Indonesian Financial Services Authority Regulation No. 1/POJK.05/2016 concerning Investment of State Securities for Non-Bank Financial Services Institution. This regulation requires 30 percent from the total investment of pension funds and 50 percent for BPJS to be placed in Government bonds.

In the subsequent period of 2016, there was a relaxation in this rule where the SOEs' bonds or equivalent can be a pool of assets which is included into the mandatory investment. However, for CIC ABS infrastructure SOE, a confirmation letter from Indonesian Financial Services Authority Regulation is required for each transaction to be recorded.

Furthermore, there is a capping policy for CIC ABS which is a maximum of 20 percent of the total issuance per issuer as required by Government Regulation number 55 year 2015 concerning Labor Social Se-

curity Asset Management. In this Regulation, the capping for investment portion of CIC ABS is different from corporate bonds that allows up to 50 percent even though the characteristics of the two are similar. Such difference and restriction minimize the space of flexibility to invest in CIC ABS infrastructure.

4.6.2 Taxation issues

According to Indonesian Law Number 36 Year 2008 concerning Income Tax, there is an indication of unequal level of playing field between CIC ABS and other investment instruments, such as mutual funds. Tax imposed on mutual fund investors is 5 percent but for CIC ABS investors is 15 percent although the form of the mutual fund is also CIC ABS.

4.6.3 Asset pricing issues

As the yield of CIC ABS fluctuates in line with the Government bond yield benchmark, there is a risk of decrease in the cash flow paid by CIC ABS to investors. Therefore, it is necessary to think of a scheme that can be structured so the fluctuation of cash flow to investors can be minimized.

4.6.4 Tax treatment issues

Tax regulation related to CIC ABS invites multi interpretation that needs further clarification by law. In term of income tax for the power-plant-backed revenue is one example. The sales of electricity invoice account receivables are carried out under the discounted cash flow method so that the discounts are potentially considered as income for CIC ABS which imposed with income tax by law. However, CIC ABS represents the interests of investors, so that tax imposition upon the discount to CIC ABS is basically also tax imposition to investors. If the Investors were also taxed upon their interest income from the CIC ABS certificate then double taxation will occur.

In the recent securitizations of toll road and power plant revenue, due to the unclear tax treatment as mentioned above, the Director General of Taxes issued a letter confirming the no-double-taxation tax treatment and administration. Due to the absence of relevant regulations, this letter of affirmation is required for every CIC ABS transaction which makes the business administration of CIC ABS is still far from efficient.

4.6.5 Lack of education and socialization

The socialization of CIC ABS should be improved. The most important thing for pension funds is that CIC ABS can provide a safe investment with a return above pension fund investments target (e.g. 10 percent). Some representatives of the pension funds have treated CIC ABS investments like bond investments, but the investors are still less familiar to CIC ABS due to lack of socialization.

4.6.6 The absence of instruments to conduct hedging liquidity

Although most representatives of pension funds conveyed that they conduct the hold to maturity strategy, the secondary market of CIC ABS remains an eligible investment criteria for most investors, including domestic investors. Although the rate of yield is generally quite interesting, there is a concern that it cannot be hedged in terms of liquidity. Therefore, initiatives such as in the Government bonds market may be needed (where certain banks serve as "primary dealer" are required to actively trade Indonesian government securities frequently). With a liquid secondary market, according to foreign investors, it can also attract foreign funds.

4.6.7 Related to sovereign guarantees

There are two different views on the need for sovereign guarantees. For some foreign investors, sovereign guarantees are required to ensure there is a party held accountable in the event of *force majeure* or mismanage-

ment towards physical asset and demand of the physical asset. This is because some foreign investors consider this cash flow still has a certain degree of uncertainty, in contrast to secured and fixed bonds. On the other hand, some foreign investors also view that if the cash flow already provides stable and growing track record, no guarantee is required. This happens for example on the recent Indonesia's securitization cases which have been published, both these instruments have AAA rating even without any Government guarantee.

4.7 Regulatory Support Needed for Infrastructure Asset Securitization

4.7.1 Demand side policy

1. *More Flexible Asset Allocation Policy*

Investment allocation policy in the form of capping for each instrument is very influential on institutional investor investment pattern such as pension funds and insurance. With the current policy as shown in Table 4, there is less flexibility to invest in long-term financial instrument. Such detailed legislative requirement which is referred as traditional model (ILO, 2017) are less flexible in dealing with external dynamics that happen, such as related to industry and risk aspects, focusing on regulatory compliance, often resulting in too narrow regulatory objectives. Even in some cases the objectives were deviated from the Government's original objectives in regulating this institution, which is to protect the members of the pension fund.

Table 4. Investment Allocation Rule of BPJS Employment

Investment Instrument	Maximum Allocation (% total)
Time Deposit, Government Bonds (SUN), Treasury Bills (SPN)	100
Corporate bonds, share, mutual funds, municipal bond	50
CIC-ABS, Real Estate Investment Trust	20
Repurchase Agreement, Direct Investment	5
Property	10

Source: Indonesian Social Security Agency

Although each of the regulation may have sound prudential-related approach in formulating this capping, this kind of regulation is still considered hurdling. This especially happen when the classification of assets in the regulation does not divide it further into the more specific asset classes. For instance, a triple A-rated corporate bonds can have bigger risk than a triple A-rated CIC-ABS. This assets' characteristics should be elaborated in the regulation to create better concept of neutrality between instruments.

2. *Tax Regulatory Neutrality*

In Indonesia, there is different tax treatment across type of investors when investing to CIC ABS. This means the neutrality principle is not fully adopted by regulation. Based on Income Tax Act, one generic regulation for return on investment from so-called debt securities, including CIC ABS, are subject to 20 percent capital gain tax. However, more specific regulation has made further division for this tariff to differ across investors. Based on Government Decree no. 100/2013, the tariff for domestic investor is 15 percent while tariff for foreign investor is 20 percent. For pension funds, this income tax is even waived by the regulation. Beside pension fund, there is also special treatment for investing in mutual fund, with tariff 0 percent up to 2013, and gradually increasing until 10 percent starting 2012. The latter makes it cheaper for institutional investors to buy CIC ABS from mutual funds than directly from capital market.

4.7.2 Supply Side Policy

1. *Provides Right Recycling Setup for Infrastructure SOEs*

The setup is especially important to ensure that infrastructure SOEs understand the objectives of undertaking an asset securitization. There are two main policy dimensions of asset securitization that needs to be stressed to SOEs, namely (1) policies that encourage the infrastructure SOEs to conduct asset securitization, and (2) policies that encourage the infrastructure SOEs to invest asset securitization proceeds into new infrastructure development.

This recycling concept is similar to the one conducted in Australia which is the Asset Recycling Initiatives (ARI), which was applied for several years and recycled some non-core infrastructure assets for the development of new infrastructure assets. The ARI comes with incentives from the central government as much as 15 percent from the sale of the non-core infrastructure assets. Herewith, ARI will be discussed more deeply.

2. *Considerations for Incentives*

Looking at the case of Australia (2016), there are multiple options to incentivize more companies to do securitization. However, this should only be considered for securitization that is a part of recycling process. In the case of Australia, a "cash back" of 15 percent is given by federal government to state government that wish to conduct asset recycling.

Next, an incentive can be considered from investment side, for example by giving a waive or a very low tax tariff for institutional investors that wish to invest in CIC ABS. This scheme is similar to Malaysia case where there is tax exemption provided by regulators to support Islamic bond market development. Again, all possible incentives shall be linked with the obligation to place the securitization proceeds into new projects. Beyond monetary incentives, more soft incentives such as incentives from management aspect for SOE could also be considered.

5. CONCLUSION

The securitization of the infrastructure assets of SOEs has been established above as an important scheme that can contribute significantly to address financing constraints in infrastructure delivery by unlocking private investment. With further expansion, this should boost investment and ultimately support growth by removing key bottlenecks in Indonesia's energy and transportation sectors.

The right strategy however is needed so that the impact of this innovative financing scheme can widen. Table 5 can summarize what this

paper has discussed on how to promote infrastructure asset securitization in the national level.

Table 5. Summary of Policy Options to Promote Infrastructure Asset Securitization

Demand Side	Supply Side
1. Investment allocation with better method a. Governance structure is improved by disclosing clear investment policy information and credible and independent investment panel b. The selection of a more suitable investment model c. Gradual and monitored Improvement d. Better investment-related policies, proposing: • More flexible policy • Tax neutrality	1. The goals must be two parts which are (1) encouraging infrastructure SOEs to conduct asset securitization and (2) encouraging infrastructure SOEs to invest asset securitization proceeds into new infrastructure development for re-securitized and further on (recycling concept) 2. Incentive-based • The monetary incentives may be (1) tax deductions for discounted cash flow, and (2) incentives for issuing costs • Beyond monetary incentives, softer incentives such as incentives from management side for SOEs can be applied 3. Intensive socialization
Establishment of *task force* at the national level	

It should be highlighted, however, that the above strategy is not a straightforward one. Therefore, at the implementation level, if one wants these initiatives to be widely implemented by stakeholders and helped the Indonesia's or any other country's infrastructure financing issues more, a coordination is needed. In Indonesia, this can be pursued using the special purpose committee or task force model. The committee will be a crucial strategy of implementation as asset securitization involves a lot of parties ranging from regulators to practitioners.

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APPENDIX 1

List of Questions for In-Depth Interviews and Focus Group Discussions (Example for Australia)

Topic	Institution
1. Issues and challenges in financing the development, especially infrastructure development in Australia, 2. Strategy to increase the role of private investment (particularly through financial sector) in the financing of infrastructure development, 3. Investment policy for superannuation industry as a dedicated long term investor for infrastructure development, 4. Development of financial instrument specific for infrastructure financing such as project bond or asset-backed securities, and 5. Role of the Treasury in infrastructure financing (central versus state government)	The Australian Treasury (Sydney)
Investor's Perspective toward Infrastructure Projects: How to Market Faster? 1. Overview of global market appetite (retail and institutional investor markets) toward infrastructure project: brown field versus green field project 2. Reviewing procurement method (to include assessment of direct versus indirect financing through capital market): which one is preferred in term of cost, risk sharing, and safety	the Global Infrastructure Hub (Sydney)
What is the Role of Government versus the Role of the Private Sector in Financing Infrastructure Projects: the Example of Australia 1. Big picture of Australia infrastructure financing strategy: funding versus financing, portion of public, private, and the scheme (direct versus capital market financing through bonds, equity, asset securitization) Review of Infrastructure Debt Capital Market Financing 1. Supply: who issues infrastructure-related debt capital market instrument? What does the company prefer: bonds or loans? 2. Demand: who buys the paper? Is NBFI strong buyers in Australia? How to increase NBFI buyers? 3. Infrastructure: how is infrastructure of the market developed? 4. Regulation: what regulation has been and will be put for promoting the depth of the market? Regulation for secondary market?	Infrastructure Australia (Sydney)

Capital Market Product Development in Fulfilling Infrastructure Financing Needs 1. Infrastructure financing via securities market • What are the type of infrastructure projects that could raise funds from public (via the stock exchange)? 2. Getting retail investor to invest in infrastructure by buying securities • What are the strategies? • Is there any incentives made in the beginning? • How to increase awareness of long term saving importance to public, especially young people?	Australian Securities and Investments Commission (ASIC) (Sydney)
Strategy of Funding and Financing Infrastructure 1. Funding and Financing via public versus private: issues and challenges 2. Scheme used for funding and financing: Bonds? Equity? Securitization? Direct financing? Which investors participate? NBFI? Public through mutual funds? 3. Role of government guarantee: what is the form of the guarantee? Guaranteeing senior loans from banks only or? How to efficiently guarantee so more projects could be covered? 4. Case study: financing model for port project	The New South Wales Government (Sydney)
1. Lessons learned behind the exemplary role of Macquarie in harnessing private investment to help meet Australia and global infrastructure financing needs • How to get financing from a brownfield infrastructure? • Indonesia only have experience in debt-based securities (mortgage). We are considering to develop the asset and cashflow-based one. What would you recommend as the necessary steps? 2. Attracting demand from global operators, institutional investors and sovereign wealth funds • Does yield really matter for investor decision in term of infrastructure investment? • Are all projects suitable with capital market financing? • Corporates always welcomes tax exemption. Is there any way that tax treatment really hampers an investor to invest in a particular infrastructure project? 3. Collaboration with Government (fiscal and non-fiscal collaboration)	Macquarie Capital (Sydney)
1. Assessing the quality a project bond 2. Assessing the quality of an infrastructure asset-based securities (secondary financing for infrastructure projects) 3. Investor's assessment versus rating agency assessment toward an infrastructure project	S&P (Sydney)

Strategy of Funding and Financing Infrastructure 1. Funding and Financing via public versus private: issues and challenges 2. Scheme used for funding and financing: Bonds? Equity? Securitization? Direct financing? Which investors participate? NBFI? Public through mutual funds? 3. Role of government guarantee: what is the form of the guarantee? Guaranteeing senior loans from banks only or? How to efficiently guarantee so more projects could be covered? 4. Case study: financing model for road project	The Victorian Government (Melbourne)
Harnessing Private Investment in Infrastructure Development 1. Overview of infrastructure debt market in Australia, and role of Industry Super Australia (ISA) in it. • Which institution plays as the market maker? Kindly explain about the big super (e.g. Australian Super) investment portfolio on infrastructure) 2. How a long-term investor like in the super industry sees a project (especially infrastructure project) type of investment • Appetite (what instruments are preferred, at which stage of project development do you usually enter? are there regulatory impediment, -or were there?) • Strategy (how to justify how much allocation for each? are there guidelines?), • Management (how to make the investment keep performing? How do you measure risk of project? How to assure safeness? Importance of Government guarantee?) 3. How ISA sees for example Indonesia's infrastructure market: roads, ports, railways, energy 4. Perspective on regulatory stimuli that matters to create more participation in the infrastructure-related investment (for example relaxation on prudential regulation for financial institution investors), and 5. Investment governance management at a glance (how is a guideline formulated? Who formulated? What are the relevant circumstances of each case?)	Industry Super Australia (Melbourne)

Mobilizing Savings and Utilizing Investment Optimally to Infrastructure 1. Overall saving-investment strategy in Australia: perspective of the Future Fund • How to increase individual participation? • Pension fund investment strategy in direct versus indirect investment (via capital market) for infrastructure project: what is the ideal proportion between the two for infrastructure project? • How opportunity-seeking is FF in searching the good projects –domestic versus overseas? 2. Overview of infrastructure investment market in Australia, and FF's role in it 3. How a long-term investor like FF sees a project (especially infrastructure project) type of investment, strategy, management 4. How FF sees for example Indonesia's infrastructure market (appetite), and 5. Perspective on regulatory stimuli that matters to create more participation in the infrastructure-related investment, and 6. Investment governance management.	The Future Fund (Melbourne)