# NON-GOVERNMENT BUDGET INVESTMENT FINANCING (PINA):
ENDORSEMENT OF PENSION FUND USE FOR
INFRASTRUCTURE INVESTMENT IN INDONESIA

A Research Paper presented by:

**Johar Mitayani**

(Indonesia)

in partial fulfilment of the requirements for obtaining the degree of

MASTER OF ARTS IN DEVELOPMENT STUDIES

Major:

**Governance and Development Policy**

GDP

Members of the Examining Committee:

Prof. Dr. Irene van Staveren

Prof. Dr. Peter Knorringa

The Hague, The Netherlands
December 2017

***Disclaimer:***

This document represents part of the author's study programme while at the Institute of Social Studies. The views stated therein are of those of the author and not necessarily those of the Institute.

***Inquiries:***

**Postal address:**

Institute of Social Studies

P.O Box 29776

2502 LT The Hague

The Netherlands

**Location:**

Kortenaerkade 12

2518 AX The Hague

The Netherlands

Telephone: +31 70 426 0460

Fax: +31 70 426 0799

**Acknowledgement**

The bittersweet moment in writing a research paper is the ‘this is it’ momentum when you keep working on with what you have in hands. A definite plan is a guidance, but when it is falling apart, the nature’s call to adaptation is a must choice. It is absolutely with the help of so many people that I finally finished this paperwork.

I wish to express an immeasurable gratitude to my supervisor, Professor Irene van Staveren for her insightful suggestions and understanding of my limitation. The first email after field work was quite depressing for me but eventually I touch the finish line. The same respect I wish to give to my second reader, Professor Peter Knorringa for his constructive suggestions in the seminars.

A thankful gratitude also goes for my family for being supporting as always of what I do and choose. Huge thanks for my friends who still remember that I am not around for a while: Ika, Hilda, Manche, Gun, Suci, and Reni. I am indebted a gratitude to Pak Widodo for giving a mostly positive encouragement for my pursuing study. For the late night writing, the laughing, and the crying, I owe Mr. Brue a sincere thank you. Above all I thank God and the one I see in the mirror, you did it my friend.

**Contents**

## List of Figures



## List of Tables

**List of Acronyms**

| | |
|---|---|
| RPJM | : National Mid-Term Development Planning |
| PPP | : Public Private Partnership |
| SOE | : State-owned Enterprise |
| PINA | : Non-Government Budget Investment Financing |
| BAPPENAS | : Ministry of Development Planning |
| OJK | : Financial Service Authority |
| EPF | : Employer Pension Fund |
| FIPF | : Financial Institution Pension Fund |
| PAYG | : Pay As You Go |
| DBPP | : Defined Benefit Pension Plan |
| DCPP | : Defined Contribution Pension Plan |
| IDR | : Indonesia Currency |
| BOT | : Build, Operate, Transfer |
| S-BOT | : Supported Toll Road |
| PBAS | : Performance Based Annuity Scheme |
| OM | : Operation and Maintenance |
| FIRR | : Financial Internal Rate Return |
| GDP | : Gross Development Product |
| BPJT | : Indonesia Toll Road Authority |
| BPS | : Statistic Indonesia |
| BI | : Bank of Indonesia |
| KPPIP | : Committee for Acceleration of Priority Infrastructure Delivery |
| THT | : Retirement Savings |
| IHSG | : Composite Share Index Price |
| LHR | : Mean Number of Traffic per Day |
| OECD | : The Organisation for Economic Co-operation and Development |
| WEF | : World Economic Forum |
| KKN | : Corruption, Collusion, and Nepotism |
| IRR | : Investment Rate Return |
| PSN | : National Strategic Project |

**Abstract**

Indonesia's financing gap in infrastructure has encouraged private sector participation, one of them is pension fund. Through Non-Government Budget Investment Financing (PINA) scheme, pension fund's involvement in infrastructure sector has begun. As infrastructure and pension fund carry the political and social-economic vibe respectively, the decision making investment is framed with political support from the government and economic examination by pension fund. The government takes combination of custodian and demiurge roles by providing accommodated regulations, enforcing state-owned enterprises preference, endorsing supported policies and structure which subsequently should be dealt by the pension fund in the economic perspective. Nevertheless, the endorsement of pension fund involvement in infrastructure is lacking the foundation of shaping pension fund's character as a true institutional investment, that is, pension fund reform. Without the pension fund reform, the involvement might be short-lived.

**Relevance to Development Studies**

Infrastructure is a government's main duty in the public service delivery. As the demand for sufficient and qualified infrastructure is getting higher, governments are experiencing the financing gap to build infrastructure. The private sector's involvement is subsequently seen as an inevitable choice, both for political and economic reasons. Pension fund is one of the targeted investors due to its fitting investment nature to infrastructure. This study focuses on understanding keys of development for pension fund use in infrastructure sector in Indonesia. Given the political and social-economic vibe of pension fund use in infrastructure, relying public service delivery to pension fund's shoulders is needed both custodian and demiurge roles of government. This paper offers a further discussion for the need of pension fund reform in shaping pension fund's role as a potential actor in public service delivery of infrastructure.

**Keywords**

Pension Fund, Infrastructure Investment, State Capitalism, Risk Management, Financing Scheme

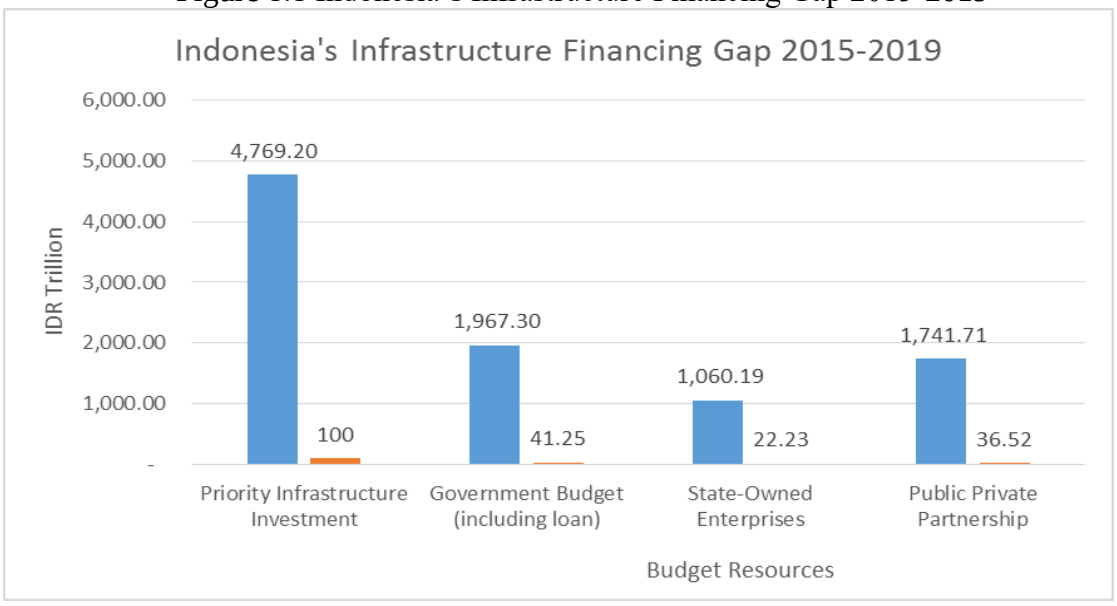
# Chapter 1
# Introduction

## 1.1 Background

Infrastructure is a substantial factor for economic development. Rao (1980:10) describes that economic development requires the best possible resources for the optimum result of production, distribution, and employment which subsequently implies the demand for savings, investment, capital, and infrastructure. Infrastructure becomes a prominent feature since public service and connectivity are well-represented of infrastructure's role in the public arena. The insufficient infrastructure becomes a constant problem of development, particularly in many developing countries, mostly due to the lack of finance.

Indonesia suffers the same situation in infrastructure development. Financing gap has been Indonesia's greatest challenge on infrastructure development as identified in the National Mid-Term Development Planning (RPJM) 2015-2019. Government of Indonesia's budget is only able for fulfilling 41.25% of the infrastructure estimation budget as shown in the figure below.

Figure 1.1 Indonesia's Infrastructure Financing Gap 2015-2019




Source: RPJM 2015-2019

This condition has led government of Indonesia generating strategic actions on encouraging private sector participation for infrastructure investment. State-owned Enterprises (SOE) becomes the stimulant actor, while the Public Private Partnership (PPP) is the encouraging way of sharing burden for public service delivery between government and private sector. Some strategic actions have been invented and implemented. Regulatory framework enhancement, institutional capacity built, and creative financing schemes are the main agenda for the utmost private sector participation.

Despite government massive support for strategic actions implementation, the fact shows that private sectors' involvement in infrastructure investment is relatively slow with only 45.26% of the prospective projects being executed in the period of five years (PPP Book 2009-2015). However, since the allocated budget for private sector's involvement either via PPP or State-owned Enterprise is approximately 58.75% of the whole budget plan, as estimated in RPJM 2015-2019, the government keeps inventing some creative financing models for the targeted partners. Availability Payment, Viability Gap Fund, and even special duty assigned by the government to certain SOE construction firms have been introduced.

Pension fund is one of the institutional investors in the market. On the infrastructure project, pension fund has made a good name for itself in developed countries' infrastructure projects. Canada, United States of America, and England are well-deserved example about pension fund's progressive involvement as an infrastructure investor. Latin America countries such as Chile, Colombia, and Peru shows that pension fund in developing countries can also be a notable institutional investor in infrastructure. It is often thought that long-term infrastructure project period is the main justification for pension fund's involvement in infrastructure.

> "The idea of investing in infrastructure seems to strike a chord with many pension plan directors and members. Infrastructure feels more "tangible" and "real" than a lot of other complex products and derivative strategies presented to pension funds these days, where they find it difficult to detect the underlying value. In addition, infrastructure is made for the long term, and there seems to be a natural fit with the long-term liabilities of many pension plans. For some people there is also a connotation to sustainable or socially responsible investing, which is an increasingly popular route chosen in particular by public and industry-wide pension plans" (Inderst 2009: 4).

The government of Indonesia, as examined the amount of fund belongs to pension fund, opens up the mechanism for long-term managed fund's involvement in infrastructure. The new financing scheme which gives a way to the possibility of pension fund's direct involvement in infrastructure is called Non-Government Budget Investment Financing (PINA). This infrastructure financing scheme is introduced on 17$^{th}$ February of 2017 and aims for the involvement of long-term managed fund, such as pension fund and insurance. The first project to be financed with PINA scheme under pension fund's involvement is toll roads belong to PT. Waskita Toll Road concession.

## 1.2 Problem Statement

Observing pension fund's investment potency and understanding pension fund's matching liabilities to infrastructure, government initiates pension fund investment in infrastructure projects under PINA scheme where there is none of government's budget involved. Examined the slow rate of Public Private Partnership (PPP), where government and private are squarely involved in funding, it is necessary to study how Indonesia can fully succeed in encouraging private sector's fully funding involvement through PINA, particularly for a new institutional investor in the infrastructure sector as pension fund is. On the private sector perspective, it is necessary to fathom their accomplishment of overcoming barriers to investment particularly on taking risks based on economic opportunities, setting the opposite business-as-usual plan, and engaging to government policy.

## 1.3 Research Objective

The research objective is to identify factors triggering the successful involvement of pension fund in infrastructure sector particularly in toll road investment in Indonesia.

## 1.4 Research Questions

Main question:

"What are the key developments of pension fund endorsement in Indonesia's infrastructure investment?"

Sub questions:

a. What are the institutional efforts done by government in generating the investment opportunities for Trans Java Toll?
b. Under what conditions are pension fund finally willing to invest in Trans Java Toll?

## 1.5 Methodology and Data Collection

This research will use descriptive analysis methodology where a research is employed to obtain a referring description of the nature of the situation as it is and explores the course of particular phenomenon (Travers 1978 as cited by Adanza 1995: 39). The research will use both qualitative and secondary quantitative data from primary and secondary sources and will take Indonesia's Trans Java toll under PT. Waskita Toll Road's concession as a case study.

a. Qualitative Data

   Primary data is collected from an interview, in order to identify constraints and ascertain the magnitude of state's and investors' involvement for pension fund use policy. The collected data refers to political will and regulatory frameworks perspective to describe the institutional and regulation constraints that in subsequently leads to analyze the investment opportunities and the conditions for investment.

   The structured interview was conducted with Ministry of Development Planning (BAPPENAS) especially to the team leader of PINA Facilitation Center on Friday, 14th of July 2017. While the intended interview with pension fund (PT. TASPEN) which was switched into written interview to Directorate of Investment particularly to Division of Business Strategy and Direct Investment *and* Division of Investment Analysis was not completed due to interviewees' circumstances. Previous researches taken into account for this paper are a 2013's Indonesia thesis by Jumahardi titled Analysis Utilization of Pension Fund as an Alternative Financing Infrastructure and 2015's Javier Alonso et al paper titled Pension Fund Momentum in Infrastructure Investment and the Relevance of Regulatory Framework for Changing Investment Preference.

b. Quantitative Data

Quantitative data consists of state infrastructure budget capacity, pension fund's portfolio, PT. TASPEN's portfolio, feasibility study, inflation rate, bank interest rate, Indonesia's global competitive index, and corruption perceptions index. These numeric data are used to support the favourable conditions and decision makings leading to open up of economic opportunities for infrastructure investment. Data are collected from BAPPENAS, Financial Service Authority (OJK), PT. TASPEN (SOE pension fund), a 2009's thesis by Syafaatun Naimah, BPS-Statistics Indonesia, World Economic Forum Report, and Transparency International.

## 1.6 Limitation of Research

The other institutional investors in the same projects, namely PT. Waskita Toll Road and PT. Sarana Multi Infrastruktur, were unavailable for interviews due to the nature of this paper and led the author to BAPPENAS and PT. TASPEN directly. The first of feasibility study made by government and the new real one made by institutional investors were out of reach due to institution restriction. However, feasibility data specifically on financial data will be replaced with data on the same feasibility study in a thesis written by Syafaatun Naimah in 2009 for Solo-Ngawi dan Ngawi-Kertosono segments and a published company data (Bahana) prior to PT. Waskita Toll Road acquisition for Pejagan-Pemalang segment.

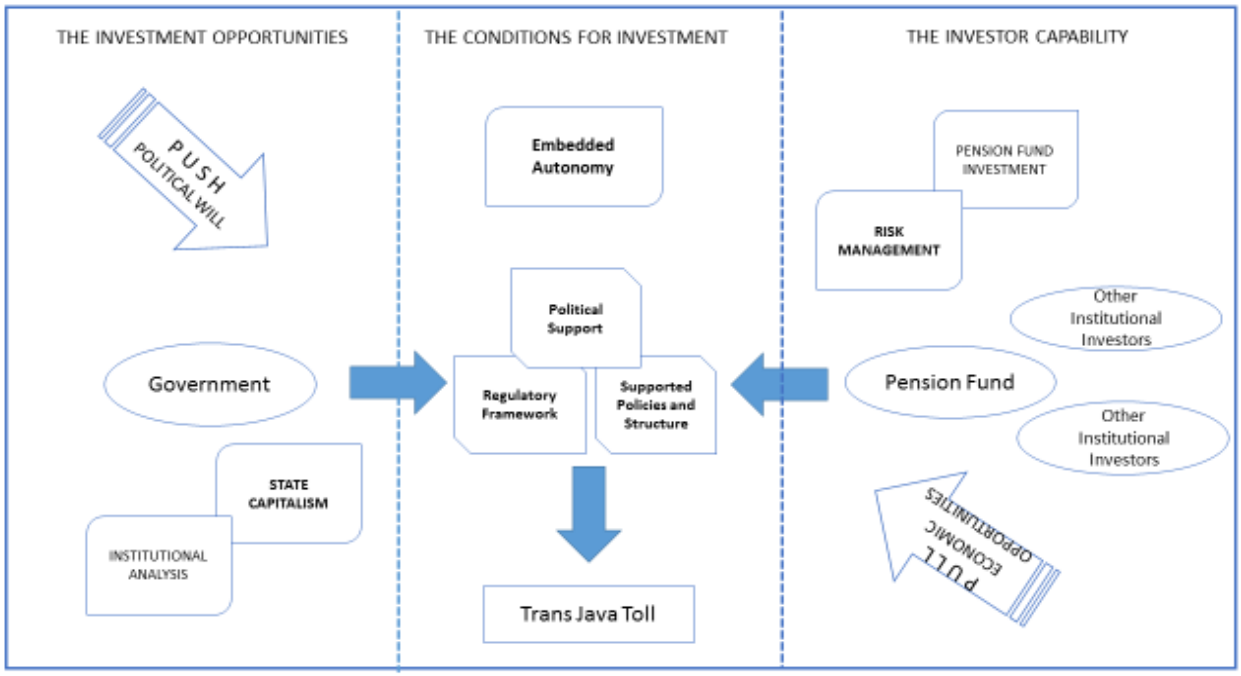
## 1.7 Organization of the Research

This paper will be arranged into 5 chapters as followed:
Chapter 1 Introduction
Chapter 2 Conceptual and Analytical Frameworks
Chapter 3 Pension Fund for Infrastructure
Chapter 4 What Makes It Possible
Chapter 5 Conclusion

## Chapter 2
## Conceptual and Analytical Frameworks

The analysis on this paper is captured in some conceptual and analytical frameworks as presented on the figure below.

Figure 2.1 The Frameworks




Source: the Author

### 2.1 State Capitalism

Global recession and financial crisis have indirectly encouraged state's intervention in the economic development. The state, as the only actor with political and economic coercion, is taking charge because it is its duty to save the economy. Bremmer (2010: 250) explains the condition as a transfer of market power from capitals of finance to capitals of political power which leads to a form of bureaucratically engineered capitalism.

> "State capitalism is a system in which the state functions as the leading economic actors and uses markets primarily for political gain. This trend has stoked a new global competition, not between rival political ideologies but between competing economic models" (Bremmer 2009: 41).

The state capitalism, as Pannekoek (1936) elaborated, is a term which is often used in two distinction ways, that is, (1) as an economic form in which the state performs the role of the capitalist employer, (2) as a condition under which capitalist enterprises are controlled by the state. The combination of state's power with capitalist tools gives government a control access to capitals, choose winners, and have a powerful hand in the investment decisions (Chen 2015). Li (2015) observes that state capitalism relates to government's arrangement on achieving its goals

within a free market economy context in which associated by heavy presence of state-owned enterprises (SOEs), particular use of industrial and trade policy, and a close relation between the state and private sector.

Under state capitalism, the economic activity is in the state-led development agenda. State capitalism tends to work better in a high cost project and large scale investment such as infrastructure.

### 2.2 Institutional Analysis

Institutions has gained major role in the economic development process. Chang (2011: 473) examines that since the late 1990s, the view agrees that poor quality institution is the root cause of economics problems in developing countries. Strong quality institutions, whether politic, social, and economic, mean for a successful development. As PPP project is a Government to Business relation, the understanding of political and economic institutions is required to fathom each institution's values, characteristics, and work of arts.

Institutional analysis, according to Holligsworth (2000: 601), consists of five level of analysis: (1) institutions, (2) institutional arrangements, (3) institutional sectors, (4) organizations, and (5) outputs and performance. Consequently, institutional analysis can be used to assess and understand behavior, rules of the games, and power relations amongst relating parties. An individual has an influence to institutions, however institutions also are significant in shaping individual's behavior. Contextually, as political and economic system are involved in the infrastructure project, individual's influence takes a form in the duty management level based on political and economic interests.

### 2.3 Embedded Autonomy

States involvement in a strategic and important economic development is an inevitable action. The involvement depends on the variation of state structure and state society relations (Evans 1995: 31). Evans (1995: 32) states that a developmental state should successfully combine the contradiction of corporate coherence and connectedness, called embedded autonomy, which is translated into roles of state: custodian, demiurge, midwifery, and husbandry.

As Evans (1995: 78-81) describes: (1) Custodian emphasizes the state's role as a regulator with the sense of protection and policing, state regulation is used for policing in the form of constraint, as well as on promotion in the form of stimulus and incentives; (2) Demiurge focuses on state's action to take a direct responsibility for public goods delivery as far as forming an organizational expansionary, often in the form of state-owned enterprises, because private capital is assumed inadequate; (3) Midwifery signifies state's role in assisting and inducing private sector's involvement, often including transnational capital, which leaves state's dependent on private sector's response and capacity; (4) Husbandry stresses the role of state in supporting and prodding the already exist private sector's involvement.

> "Taken together, these four roles provide a framework for labeling the involvement of particular states in particular sectors. They are not mutually exclusive. To the contrary, they

> often appear in combination. The state may act as custodian and demiurge in the same industry, or combine both with midwifery. The combinations and their consequences depend in turn on the sectoral contexts" (Evans 1995: 81).

## 2.4 Risk Management

The demand for infrastructure in developing countries is enormous since infrastructure has its own leverage to support economic development. Thierie and Moor (2016: 280-281) recognize the characteristics of infrastructure investment as insensitivity of its returns to economic cycle, typically require high up-front capital investment, long asset life cycle, and potential for capital growth through active management of the assets.

The first major problem of infrastructure project is its high cost characteristic. As a result, infrastructure project also bears a high risk. Problems for infrastructure projects list from cost overruns, delays, failed procurement, and unavailability of financing (Beckers et al 2013: 1). Other problems include limited planning, inadequate stakeholder involvement, hampered cost and schedule controls, inexperienced management, and a lack of skilled labours (PwC 2017). Investors can minimalize problems through a good mitigation of risk management. The basic principle of risk management is an ability to allocate risks to the right party who will be the best to bear them.

> "Risk management is a formal and orderly process of systematically identifying, analyzing, and responding to risks throughout the life-cycle of a project to obtain the optimum degree of risk elimination, mitigation and/or control" (Wang et al 2004: 238).

According to Bonaglia et al (2015: 14-15) risks for infrastructure projects can be identified into three major group, that is, political and regulatory risks; macroeconomic and business risks; and technical risks. Therefore, strategies should be developed in term of mitigate those risks. As financing gap often becomes obstacle for infrastructure investment in developing countries, funding strategy is always the first concern for investment. BAPPENAS (2015) develops strategies for infrastructure investment namely: (1) regulation: deregulation and sector's restructuration, debottlenecking; (2) institutions: capacity building, incentive management, regionalization, asset management; (3) financing: creative financing, tariff rationalization, institutional investors' endorsement; (4) social engineering: user charge scheme for return of investment.

Grimsey and Lewis as explained by Craciun (2011: 481) identify risks experiencing in PPP funding structure include: (1) technical risk, (2) construction risk, (3) operational risk, (4) risks impacting the income, (5) financial risks, (6) the risk of force majeure, (7) regulatory risk, (8) environmental risk, and (9) the risk of defaulting on the obligations. In addition, Indonesia Infrastructure Guarantee Fund (2015) finds that infrastructure projects bear the risk for: location, design-construction-operation, sponsor, financial, operational, income, network connectivity, interface, politic, force major, and asset ownership.

Institutional investors are often becoming the high risk bearers particularly when the infrastructure project is poorly managed. As in the solicited PPP project where the involvement of private sector are in the latest stage of investment, institutional investors are often given the embedded risk resulting from the planning stage. Directorate of Infrastructure Investment Development (2015) finds that risk management gives benefits to parties involved in the

infrastructure PPP project, such as, (1) government: minimalize efficiency and direct to the best investment scheme option, (2) contractors: identify the highest risk, give alternative for risk mitigation, provide risk evaluation, material for partnership proposal, and (3) funding institutions: identify the highest risk, help in risk profile assessment and required adequate guarantee, and count the reasonable insurance premium. All parties in the project need to be subjected to rigorous private-sector risk-management, risk-allocation, and financing due diligence to the success of the project (Beckers et al 2013: 4-5).

## 2.5 Pension Fund Investment

Pension fund is an example of safe player institutional investors. Its investment is usually short term and focused on bonds, deposit, cash, and equities. However, the need to gain more sources of return and the nature of investor's business mind has led pension fund taking a different route. Pension fund recently diversify its portfolio in investment by allocating asset to private equity, real estate, infrastructure, and hedge funds (PwC Luxembourg 2016: 3). Infrastructure becomes an interest because of its: (1) long duration, (2) protection against volatility, (3) protection against inflation, and (4) diversification (Beeferman 2008: 7).

In countries where pension fund is an obligatory, the pension fund's asset is huge. Jumahardi (2013: 2) explains that in developed countries such as England, Canada, and United States of America, the pension fund's proposition towards Gross Development Product is very high between 65-89%. Therefore, pension fund's involvement in the infrastructure project is inevitably option due to the demand for investment diversification. However, this inevitably option requires more work in researching, constructing the right portfolio, selecting the right manager, and reviewing the board (PwC Luxembourg 2016: 20). Furthermore, an infrastructure project is designed for the long term that seems fitting with the long term liabilities of pension fund business plan (Inderst 2009: 4).

## Chapter 3
## Pension Fund for Infrastructure

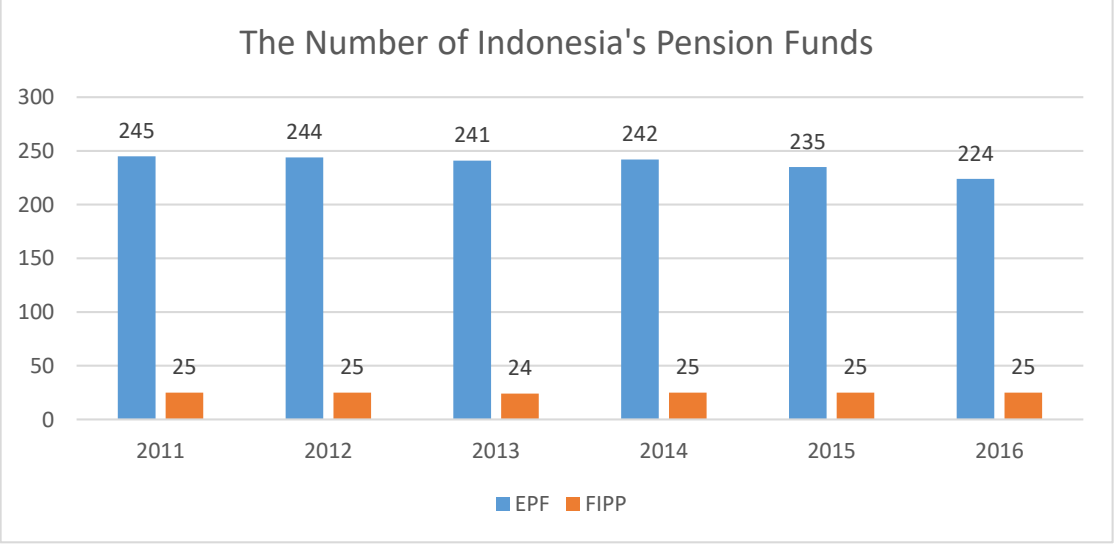
### 3.1 Overview

According to Cambridge English Dictionary (2017), pension fund is "money that employees of a company pay regularly to be invested to provide them with a pension when they are older". The National Social Security Law has usually become the entry point of pension fund's establishment in those respective countries. The pool of fund coming from this investment plan is managed by a financial institution or trust. As an industry, pension fund business has grown from public to private management and become one of important institutional investors in the business world.

Pension fund in Indonesia firstly established only for public sector employees based on the Government Regulation No. 25 of 1981. This mandatory scheme is conducted by three state-owned enterprises to distinctive participants. PT. TASPEN is focused on civil servants, PT. JAMSOSTEK is meant for private employees, and PT. ASABRI aims for security and armed forces services. The payment is adopted the 'Pay As You Go' method funded from state budget. The voluntary scheme, as noted by Wijana (2007), is a privately managed fund directed by Employer Pension Fund (EPF) and Financial Institution Pension Fund (FIPF). According to Law No. 11 of 1992, EPF is a pension fund, founded by person or institution with a number of employees, which is able to run both the Defined Benefit Pension Plan (DBPP) and the Defined Contribution Pension Plan (DCPP). While, FIPF is founded by commercial banks or insurance enterprises to run DCPP scheme only.

Indonesia Financial Service Authority (OJK) on December 2016 recorded that there were 249 pension fund institutions. This number was decreased from 270 in 2011 as can be seen below.

Figure 3.1 The Number of Indonesia's Pension Funds

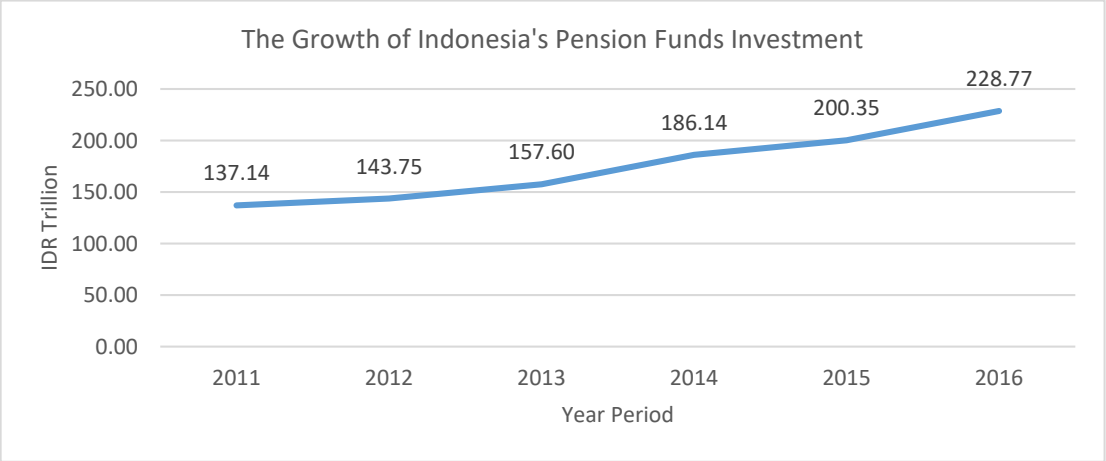



Source: OJK (2016)

There are some factors leading to the decrease of pension fund number as reported by OJK such as: the less favorable return of investment, efficiency program, bankruptcy,

consolidated/joined/merged with other pension fund, company shifting of pension benefit program and others. Even so, the two main reasons of liquidation were merger and acquisition. However, the decrease of pension fund number was inequivalent with the growth of pension funds investment. In between 2011 to 2016, the growth of pension funds investment was increase by 59.95% from IDR 137.14 Trillion to IDR 228.77 Trillion.

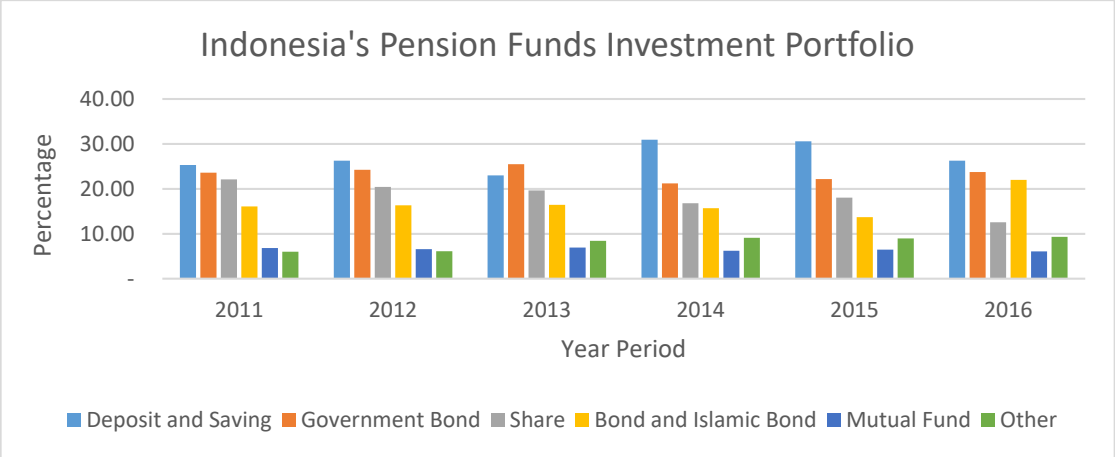
Figure 3.2 The Growth of Indonesia's Pension Funds Investment




Source: OJK (2016)

Pension funds' investment, however, mostly spend for a safe-play investment. Deposit, savings, and government bonds are still the appetite for investment. As reported by OJK, in the period of 2011 to 2016, the pension funds' investment portfolio was divided into six portfolios: (1) deposit and saving, (2) government bond, (3) share, (4) bond and Islamic bond, (5) mutual fund, and (6) other: assets backed security, collective investment contract, direct placement in share, land and building, other admitted investment. Infrastructure investment, which by Minister of Finance Decree No. 511 of 2002 is up to 10% of total investment, is included in the category of other along with five investment instruments.

Figure 3.3 Indonesia's Pension Funds Portfolio




Source: OJK (2016)

The safe-play investment decision may refer to the OJK regulation No. 3/POJK.05/2015. The regulation clearly defines the qualitative and quantitative regulations of approved investment for pension funds. Pension funds should only be invested their money to saving, deposit on call, time deposit, time deposit, certificate of deposit, certificate of Central Bank, government bond, share, bond, Islamic bond, mutual fund, medium term note, assets backed security, collective investment contract, stock option contracts, repurchase agreement, direct placement in share, land, building, land and building. The quantitative percentage for respective investment products serves for maintaining safe-play pension fund investment. The risk of investment becomes the main concern since pension funds investment must be maintaining the balance due date between their investments and obligations to their members.

### 3.2 The Appetite for Infrastructure Investment

Infrastructure has a varied definition with some similarities and differences respectively. In the economic perspective, Gramlich (1994: 1177) writes that:

> "The definition that makes the most sense from an economics standpoint consists of large capital intensive natural monopolies such as highways, other transport facilities, water and sewer lines, and communications systems".

Parikesit (2011: 15-16), in the public policy perspective, understands that infrastructure is public goods, having financial and economic values, permanent, sunk costs, and a non-transferable asset. This definition implies that infrastructure investment is a long term decision. Moreover, Hansen as cited by Torrisi (2009), discerns infrastructure into two types, namely economic and social infrastructure, due to the fact of direct and indirect level of influence to the economic development. Economic infrastructure directly supports economic activities and is usually a user-charge goods or demand-based revenue. Highways, airports, seaports, electricity, irrigations, dam are economic infrastructure. Whereas social infrastructure accommodates social services with the objective is to support the economic activities. Hospitals, schools, parks, and green areas are the examples.

Sufficient infrastructure is one of the keys for the economic growth. Infrastructure investment is a complimentary yet a basic needs for other investment. The lack of infrastructure is likely to be a constraint for other investment activities. Maryaningsih et al (2014) examines the significant role of accumulation for physical investment in the form of infrastructure as one of determined factors for economic growth enabler in Indonesia economy. Infrastructure investment, in the Indonesia context especially in roads and electricity, is a significant enabler for economic growth including per capita income.

The degree of infrastructure sufficient effectively will lead to the index of country's competitiveness in the global market. Indonesia's index of competitiveness, on scale of 7, can be seen below. The 2$^{nd}$ Pillar: Infrastructure is considered as basic requirement along with institutions, macroeconomic environment, health and education.

Table 3.1 Indonesia's Global Competitiveness Index 2012-2016

| Year | Rank | Global Competitiveness Index | 1st Pillar: Institutions | 2nd Pillar: Infrastructure | 3rd Pillar: Macroeconomic Environment | 4th Pillar: Health and Primary Education | 5th Pillar: Higher Education and Training | 6th Pillar: Goods Market Efficiency | 7th Pillar: Labor Market Efficiency | 8th Pillar: Financial Market Development | 9th Pillar: Technological Readiness | 10th Pillar: Market Size | 11th Pillar: Business Sophistication | 12th Pillar: Inovation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | 50 | 4.40 | 3.86 | 3.75 | 5.68 | 5.69 | 4.17 | 4.29 | 3.87 | 4.07 | 3.56 | 5.27 | 4.30 | 3.61 |
| 2013 | 38 | 4.53 | 3.97 | 4.17 | 5.75 | 5.71 | 4.30 | 4.40 | 4.04 | 4.18 | 3.66 | 5.32 | 4.44 | 3.82 |
| 2014 | 34 | 4.57 | 4.11 | 4.37 | 5.48 | 5.67 | 4.53 | 4.54 | 3.81 | 4.45 | 3.58 | 5.34 | 4.47 | 3.93 |
| 2015 | 37 | 4.52 | 4.09 | 4.19 | 5.50 | 5.59 | 4.45 | 4.43 | 3.74 | 4.19 | 3.49 | 5.74 | 4.35 | 3.94 |
| 2016 | 41 | 4.52 | 4.10 | 4.24 | 5.51 | 5.28 | 4.50 | 4.40 | 3.80 | 4.33 | 3.54 | 5.71 | 4.33 | 3.99 |

Source: World Economic Forum Reports 2012-2016

The moderate competitiveness of infrastructure pillar as reported by World Economic Forum and the necessity for economic growth have led infrastructure development as a main concern in Indonesia economic development. As Chile and Colombia are chosen as country's learning experience in endorsing pension fund use for infrastructure investment, comparison of these three countries level of competitiveness as a drive for infrastructure demand can be seen below.

Table 3.2 The Comparison of Global Competitiveness Index

| Country | Rank | | | | | Global Competitiveness Index | | | | | Basic Requirements | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2012 | 2013 | 2014 | 2015 | 2016 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Indonesia | 50 | 38 | 34 | 37 | 41 | 4.40 | 4.53 | 4.57 | 4.52 | 4.52 | 4.74 | 4.90 | 4.91 | 4.84 | 4.78 |
| Chile | 33 | 34 | 33 | 35 | 33 | 4.65 | 4.61 | 4.60 | 4.58 | 4.64 | 5.35 | 5.28 | 5.25 | 5.12 | 5.08 |
| Colombia | 69 | 69 | 66 | 61 | 61 | 4.18 | 4.19 | 4.23 | 4.28 | 4.30 | 4.40 | 4.44 | 4.45 | 4.46 | 4.35 |

Source: World Economic Forum Reports 2012-2016

For Indonesia respectively, the 58.75% financing gap of government budget in the period 2015-2019 in turn requires private sector participation. SOEs and pure private business entity are projected to fulfil the financing gap through various financing schemes under public private partnership model since a full privatization mode is politically unfavorable. In the long term, private sector participation is a necessity partner for not only unlocking private sector capital, but also providing qualified infrastructure for public service delivery.

> "The state changes its role from owner and provider of public services to purchaser and regulator of them. The private sector comes in as financier and manager of infrastructure, obviously expecting an attractive return" (Inderst 2009:5).

With a greater expectation of private sector participation, the possibility of long term institutional investors, such as pension fund, to invest in infrastructure sector is discussed and assessed. However, infrastructure has its own distinctive characteristic which affect its suitability for any investors' proposition. The first major distinctive infrastructure characteristic is its returns' insensitivity to economic cycle (Thierie and De Moor 2016: 280 as referred to Oyedele 2014). This is an important feature of infrastructure that is attractive to investors which to some extent is

still depending on the level of regulation and the inelasticity of demand for the provided services (Thierie and De Moor 2016: 280). The second attractive characteristic is its demand for high capital resources which in turn limits the number of potential investors into market. As a result, infrastructure assets possess a monopolistic or quasi-monopolistic market position (Thierie and De Moor 2016: 280 as referred to Oyedele 2014) that secures stable long-term cash flows and in which matches its long-term liabilities. Another characteristic to be considered is its asset life cycle. Infrastructure has long asset lifecycle (Thierie and De Moor 2016: 281 as referred to Oyedele 2014) which often gives negative returns in the construction stage but is able to bound back in the operation stage.

Long-term infrastructure characteristic is widely acknowledge as the starting point of pension funds' involvement for the reason of matching liabilities. Inderst (2009:7) indicates that the comprehension that the return of infrastructure investment is insensitive to fluctuation can be a magnet for pension funds decision to direct their investment plan on infrastructure sector. The attraction of infrastructure investment to pension funds comes from many reasons. Beeferman (2008:7) observes that the attraction lies for the reasons that infrastructure investment has: (1) long investment duration, (2) protection against volatility, (3) protection against inflation, and (4) diversification. The long duration of infrastructure concession rights sets for long term yield and predictable revenue for investors. Alonso et all (2015: 4) claims that "there is a neat fit between the long-term time horizon for infrastructure projects to mature and the pension fund portfolio". Concession rights period of 30-40 years is considered as a common duration for such investment. Infrastructure as a public goods creates monopoly on the service and an inelasticity demand for the mentioned service. It operates like a regulated monopoly without wildly fluctuating asset value (Alonso et all 2015: 4) and has cash-flow stability when the project reaches its mature stage.

### 3.3 Constraints and Challenges

Infrastructure investment constitutes well-plan and risk-wise attitudes from both government as a project owner and institutional investor as an investee. However, the high risk investment characteristic attached to infrastructure has risen constraints to be faced by public and private entities. Investment is likely possible when these constraints be addressed first. Even though consideration needs to be recognized due to countries' context, Della Croce (2011) categorizes three basic barriers as constraints to pension funds investment in the infrastructure sector into three major scopes, namely: (1) the investment opportunities, (2) the investors' capability, and (3) the conditions for investment.

Table 3.3 Constraints for Pension Fund's Investment in Infrastructure

| The Investment Opportunities | The Investor Capability | The Conditions for Investment |
|---|---|---|
| Lack of political commitment over the long term | Lack of expertise in the infrastructure sector | Negative perception of the infrastructure value |
| Regulatory instability | Problem of scale of pension funds | Lack of transparency in the infrastructure sector |

| | | |
|---|---|---|
| Fragmentation of the market among different level of governments | Mis-alignment of interests between infrastructure funds and pension funds | Shortage of data on performance of infrastructure projects, lack of benchmark |
| Lack of clarity on investment opportunities | Short-termism of investors | |
| High bidding costs involved in the procurement process of infrastructure projects | Regulatory barriers | |
| Infrastructure investment opportunities in the market are perceived as too risky | | |

Source: Della Croce (2011: 23-24)

BBVA Economic Research Department (2008: 9) identifies that the potential constraints of pension funds investment in infrastructure consisting of three major scopes, namely:

a. General

In the general assessment, pension funds investment is constraint by the "lack of confidence in long-term investment". Even though investment assessment shows the matching ability between infrastructure and pension funds plan, the changing investment strategy from short term to long term must need more consideration to be reckoned. Secondly, "the infra-development of basic infrastructure concession mechanism". Private sector participation in basic infrastructure is commonly done through concession mechanism. Regulation to pension funds investment is strict with qualitative and quantitative limitation which is not always match with the concession criteria. Thirdly, "the lack of adequate financial instruments". The investment product, allowing pension funds investment in infrastructure, may not match with the business plan of gaining recurring income since in the construction stage, negative income may be experienced by investors.

b. Pension Regulation

Regulation for institutional investor such as pension fund and insurance is usually stricter than other investors due to the safe guard policy. "Prohibition (e.g direct participation in infrastructure), quantitative restrictions (instruments and/or issues) and rules on liquidity, valuation and ratings" are examples of regulation constraints. Secondly, "performance regulation (minimum returns)". Pension funds, particularly SOE, have their own obligation to make some profit and for government with annual budget policy the demand for returns is obligatory. Thirdly, "switching of affiliates between fund administrators".

c. Technical

In the technical area, the number one constraint is that "a higher participation in domestic infrastructures may raise the sovereign risk of portfolio (due to investment abroad limits)" and secondly, "pension funds may be already investing indirectly in infrastructure firms".

In Indonesia context, Jumahardi (2013:105-106) observes that there were four aspects of pension funds investment barriers in infrastructure, namely: (1) market players: lack of knowledge for financial instrument, commercial bank is still the only source of fund, lack of infrastructure sector transparency; (2) product characteristic: pension fund is underutilized, safe-play investment direction, miss-match of infrastructure and pension funds interest, high cost and long term tenure; (3) regulatory: lack of direct investment regulation, quantitative regulation as limitation, no long-term political commitment, unsettling regulatory frameworks; (4) risks: lack of government commitment and guarantee, less conducive investment climate, less stable macro economy, and high risk infrastructure characteristic.

In the initiation of Indonesia pension fund's involvement in infrastructure through PINA scheme, the first constraint must be addressed by investor is the risk of negative returns in the first two years of construction stage. Even if the regulation allowing infrastructure investment through indirect investment was still on the limit of 5%, the risk of negative return is much more appealing to be considered by SOE pension fund which has grown to be a safe-play investor.

> "… the biggest constraint is the reluctance to experience negative returns in the construction stage, so that the open minded, brave, and aggressive investment manager is very important" (PINA Facilitation Center 2017).

As presented in the table below, the expected return and annualized volatility of infrastructure asset are higher than the safe-play investment product such as bonds and stocks, however infrastructure asset has its worst returns in negative percentage compare to those mentioned products before. Therefore, despite the qualitative and quantitative regulations applied, infrastructure investment has its own boundary, in the form of percentage of the worst returns, which might hinder it to be chosen among institutional investors.

Table 3.4 Comparison of Assets and Their Investment Expectation

| Assets | Expected Return | Annualized Volatility | 5% of the Worst Returns | Ratio Risk/Return |
|---|---|---|---|---|
| Bonds (5 years) | 5.20% | 4.40% | 3.10% | 1.18 |
| Stocks | 8.10% | 18.20% | 1.10% | 0.45 |
| Real Estate | 7.00% | 9.50% | -1.30% | 0.74 |
| Infrastructure | 9.30% | 7.90% | -1.50% | 1.18 |
| Private Capital Funds | 10.00% | 30.20% | -7.30% | 0.33 |

Source: Morgan Stanley Liability model data as of May 2007 on Tuesta (2012)

### 3.4 Lessons Learned from Other Countries

a. Chile

Chile pension fund's involvement in the infrastructure sector came into surface as the need for private sector investment in infrastructure was demanded because of infrastructure deficit and low level of competitiveness. Private sector's involvement in infrastructure sector made into motion with the introduction of concession system with BOT (Build, Operate, Transfer) system establishment in 1993 (Alonso et al 2003:76). The concession system, introduced as a form of private sector participation, helped the institutional investors' initiation since the special pledge for public works concession was made that allowing the creation of long term investment guarantee especially in the case of bankruptcy (Alonso et al 2003:81) including the compulsory compensation mechanism where a certain level of revenue for the entire concession term was guaranteed by the State. A paying culture for the use of public infrastructure also contributed in reducing risks based on public opinion's opposition (Alonso et al 2003: 86). At that time, Chile pension funds had already experienced a reform in 1981, from the traditional Pay As You Go system into Individual Account system (Cerda 2007: 541). Since then, Chile's pension fund has been run through three pillar scheme: solidarity pillar, mandatory contributory pillar, and voluntary contributory pillar. As a result, pension funds had a massive amount of capital equal 66% of GDP in 2009 (Alonso 2003: 90). This tremendous capital was increasing the pension funds' ability for long term investment such as infrastructure.

Pension funds system in Chile bounded to a strict investment restriction resulting in limited pension funds investment allocation. Pension funds were only allowed to invest in financial instruments. Consequently, pension funds' investment in infrastructure project were conducted by purchasing stocks or bonds in the electricity, health, and telecommunication companies (Alonso et al 2003: 76). However, these investments were far from increasing the basic infrastructure demands. In addition, concerning the concession system, pension funds were forbidden by regulations to invest in an unproven track record, low liquidity or no investment grade company which initially had made Pension Funds Administrator (PFA) undo its participation in financing public infrastructure concession (Alonso et al 2003: 109).

Institutional investors were legally encouraged to participate in infrastructure when government implemented a new instrument investment called Infrastructure Bond: a debt instrument issued by public infrastructure concessionaire in 1998 (Alonso et al 2003: 110). The creation of infrastructure bond was based on the concession of Costanera Rote urban highway project. This project was eyeing pension funds as one of the potential investors, however as the project was in initial stages and the lack of investment grade rating, pension fund was legally constraint by regulation to participate. In order to facilitate institutional investors' participation, legal changes to financial and infrastructure regulations were generated, one of which was the allowance for pension funds and insurance companies to invest in bonds without history using new long term investment instrument, the infrastructure bond (Gomez-Lobo and Hinojosa 2000: 46). However, it should be noted that government guarantee was playing a big role in this project.

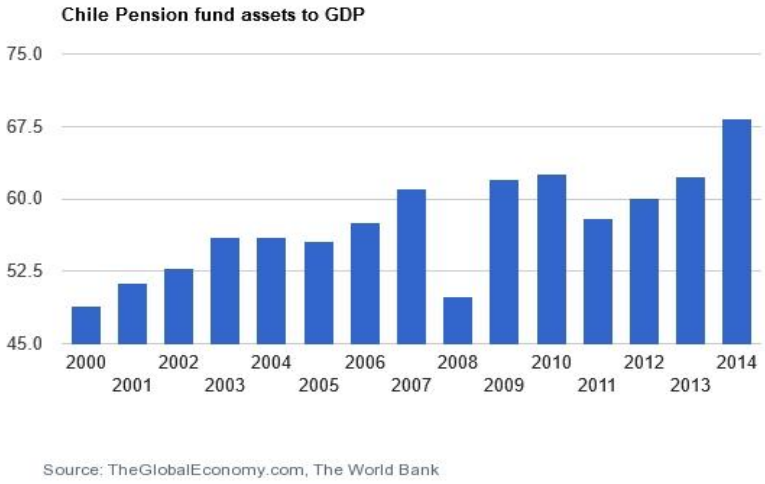
Pension funds investment in infrastructure then can be done in two ways: (1) indirect investment through purchasing stocks and bonds, and (2) direct investment through purchasing

of bonds from concessionaire of infrastructure projects (Alonso et al 2003: 93). Examined Chile pension funds' involvement in infrastructure, Alonso et al (2003: 76-77) noted that:

> "The Chilean experience is interesting, since both public and private interests joined together to lift the restrictions that limited the use of the pension fund and life insurance industries due to regulations. It was determined that both the concession companies as well as institutional investors would benefit if the latter were allowed to invest in these bonds without getting rid of the regulations that protected them".

This graphic below shows the comparison of Chile pension fund assets to GDP until 2014.

Figure 3.4 Chile Pension Fund Assets to GDP




The recent reform of the pension fund law in 2016 allows pension funds invest in closely held companies and real estate for the first time ever directly and buy shares in infrastructure concessions including widen its exposure for alternative assets from 3% into 5% of its total portfolio (Bloomberg 2016). Different from other countries, Government of Chile does not have enormous debts to pay public employees' pensions since the pension fund privatization system in 1981 (Mander 2016). In the year 2017, there is a regulation initiative to increase the exposure to alternative assets from 5% into 15%.

It should be noted that Chile's pension fund's involvement in infrastructure are fully supported by the reform of pension fund system which delivers abundant fund ready for new investment instrument and also the initiation of infrastructure bonds which given the definite model of infrastructure investment for institutional investors.

b. Colombia

Colombia suffers other developing countries' symptom, the poor quantity of infrastructure leading to the decrease of competitiveness. The priority to infrastructure provision is also backed up by the geographical characteristics and the emerging economic growth (Alonso et al 2003: 112). The annual infrastructure financing gap is around US$ 1.5 trillion (IFC 2016). The regulatory framework for infrastructure development was drastically changed in 1991 by giving

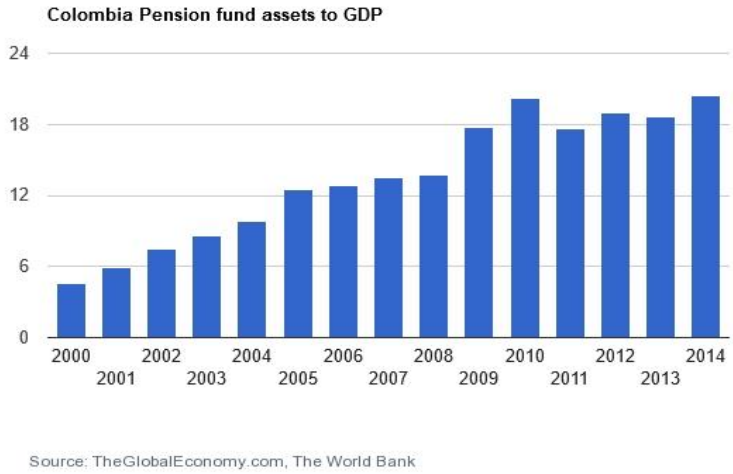
a greater participation for private sector's involvement. Colombia, likewise Chile, bases its private sector's involvement through concession contracts and partnership contracts to some cases (Alonso et al 2003: 115) which provide efficient and qualified infrastructure. All contracts have amendments and unilateral termination clauses including reversal clause in which properties must be given back to the state without compensation after concession term is over (Alonso et al 2003: 129). The minimum income guarantee and natural disaster are part of the contract.

Public pension fund in Colombia runs a defined-benefit scheme finance on Pay As You Go basis, while private pension funds are based on defined contribution scheme. As the need for infrastructure investment has grown, pension funds have become an important institutional investor. Regarding infrastructure investment, pension funds are allowed to invest by means of indirect investment through three different instruments: private equity funds (5% of total portfolio), stocks (40% of total portfolio), and debt instruments (40% of total portfolio). Alonso et al (2013: 133) added that for private equity funds, the necessity to mitigate risks is lied to the regulation criteria for minimum experiences of pension funds' investment manager, not to include that an investment grade should be obtained by concessionaire. Regarding risks, a concessionaire is assumed to take construction, operation, and maintenance risks. Current regulations give pension funds higher limitation for investment in moderate-risk portfolio (20%) and high-risk portfolio (25%) including the allowance to invest in hedge funds, high yield, leveraged mutual funds, and secondary market (Abrego and Gutierrez 2016).

In order to modernize highways, Colombia launches the Fourth Generation Toll Road Concessions Program with 17 launched projects since 2014. In a toll road project, there is no minimum revenue guarantee, but traffic risk is guaranteed by government. However, a study claimed that the main hindrance for infrastructure investment in Colombia is the absence of infrastructure project contracts with adequate investment incentives (Alonso et al 2003: 139).

This graphic below shows the comparison of Colombia pension fund assets to GDP until 2014.

Figure 3.5 Colombia Pension Fund Assets to GDP



After the financial law reform in 2009, Colombia's pension funds are introduced to a multi-fund system where participants of individual savings schemes, including mandatory ones, can chose their own portfolio either conservative, moderate, or risky approach (Amaral 2010). This system gives ways for pension funds to take a daring approach to investment.

Colombia's pension fund's involvement in infrastructure is fully supported by the higher quantitative regulation which gives a possibility for more risky investment. In addition, the national policy of toll road concession and the traffic guarantee policy have made infrastructure investment more favourable for institutional investor particularly pension fund.

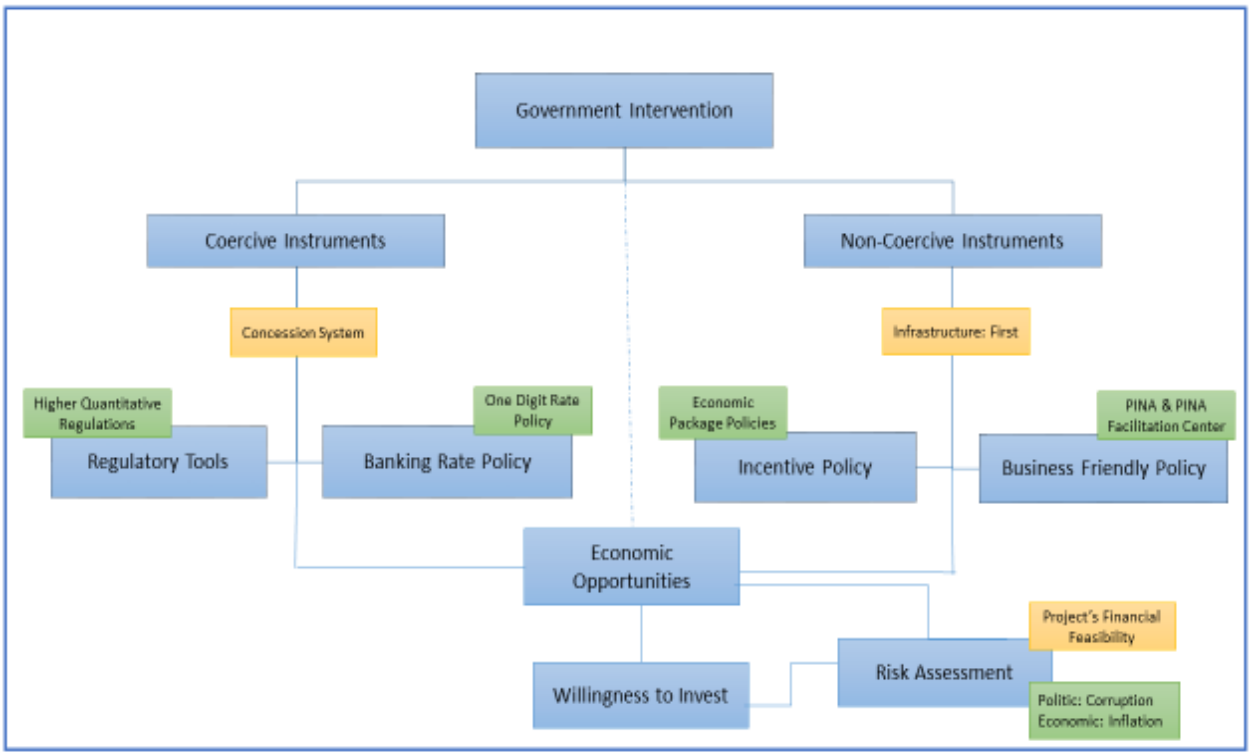
## Chapter 4
## What Makes It Possible

An infrastructure investment, particularly the basic ones, stimulates other investment and economic opportunities. It gives a platform for potential economic growth as stipulating connectivity and providing basic demand for industry. Based on Della Croce's (2011: 23-24) three major settings of investment barriers, the willingness to invest is a mirror of the ability to decrease investment barriers. In doing so, the key developments of pension funds investment will be analyzed into three major setting areas: the investment opportunities, the investors' capability, and conditions for investment.

### 4.1 Creating Opportunities

In an era where state become public service purchaser and regulator (Inderst 2009: 5), the private sector's involvement in public goods delivery is so desirable and demanded. States, with the original duty for public service provision, are left to take the endorsing role using their coercive power through established regulations. However, as private sector's investment is logically based on the economic decision-making, a non-coercive approach, that is, a trade-off, may also be used. The combination of coercive and non-coercive instruments give a greater chance to make the most of policy, since Mulder (2004) examines that coercive measure will give predictable outcome, while non-coercive measure fills the demand for efficiency.

Figure 4.1 The Way of Thinking




Source: the Author

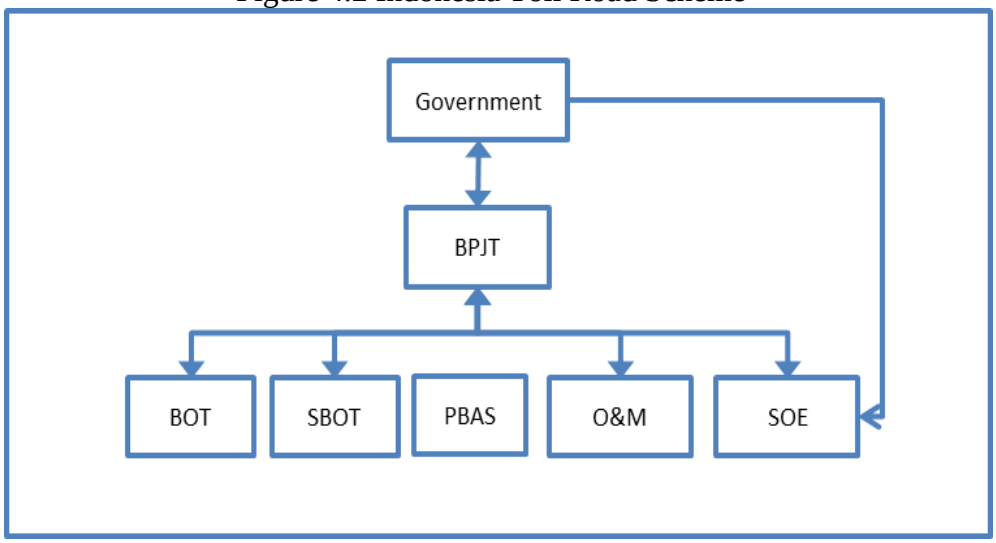
***Coercive Approach***

A coercive approach, initiated by government intervention, basically formulates in the form of regulations. In hand one, infrastructure is a complex project consisting of different stages form planning, construction, operation, and maintenance. As a result, regulations may vary from one stage to another stage. On the other hand, pension funds is a delicate managed public and private funds. The function of pension funds as a financial security net in the retirement period have led governments implementing a strict safe guard policy for pension funds investment. Qualitative and quantitative regulations are the mean.

**Concession System**

The initial regulation should be established in providing private sector participation is a concession system. Concession, as defined by Shafik and Frydman (1998: 5), is "broadly refer to any arrangement in which a firm obtains from the government the right to provide a particular service under conditions of significant market power". Concession system has been introduced and widely used in infrastructure market in Indonesia, particularly in toll road projects. Depending on the financial measurement, toll road contracts in Indonesia are divided into four schemes: Build-Operate-Transfer (BOT), Supported Toll Road (S-BOT), Performance Based Annuity Scheme (PBAS), Operation and Maintenance (OM), and State Guarantee Model (SOE). BOT has been widely used due to the fact that Indonesia's toll roads have been developing massively in Java Island, in which 80% of Indonesia economy is come from, and that the fully private sector participation can be hoped for the reason of high level of financial internal rate return (FIRR). Regulations concerning concession for toll road are based on Law No. 38 of 2004 of Road, Government Regulation No. 15 of 2005 of toll road, and Government Regulation No. 43 of 2013 of the 2nd amendment of Government Regulation No.15 of 2005). Related regulations such as Presidential Regulations No. 38 of 2015 of Public Private Partnership for Infrastructure Provision, Agrarian Law No. 5 of 1960, Presidential Regulation on procurement No. 54 of 2010 and its amendments, and National Public Procurement Agency Regulation No. 19 of 2015 of Procurement for Investors in Infrastructure Provision are complement.

Figure 4.2 Indonesia Toll Road Scheme




Source: Indonesia Toll Road Authority/BPJT (2015)

**Pension Funds Investment Regulation**

Based on safe guard policy, pension fund regulations are bounded to qualitative and quantitative restrictions. Pension funds investment in Indonesia must refer to Law No 11 of 1992 of Pension Fund, Law No. 40 of 2004 of National Social Security Net, Minister of Finance Decree No. 199 of 2008 and its amendment No. 19 of 2012 of Pension Funds Investment, Financial Service Authority Regulation No. 3 of 2015 of Pension Funds Investment, Minister of Finance Regulation No. 23 of 2016 of Civil Servant Pension Funds Management and other related technical regulations. According to qualitative regulations, defined on Minister of Finance Decree No. 511 of 2002, pension funds investment is only able to invest on 13 instruments, namely: time deposit, deposit on call, certificate of deposit, share, bond and Islamic bond, direct placement in share, medium term note, land (in Indonesia), property (in Indonesia), land and property (in Indonesia), mutual fund, government bond, and certificate of central bank including investment products, as reported by OJK, such as saving, assets backed security, collective investment contract, stock option contracts, and repurchase agreement. Abroad investment is restricted.

The qualitative regulation does not define infrastructure as one of pension fund investment instrument. However, infrastructure investment can be conducted through direct investment by buying share in an unlisted infrastructure company. According to Minister of Finance Decree No. 511 of 2002, direct investment is maximum of 10% of total investment. If we see the pension fund investment portfolio from 2011-2016, we can see that direct investment has never been a favorable choice of investment. Instead direct investment including assets backed security, collective investment contract, stock option contracts, repurchase agreement, land and building only took 9.31% of total investment portfolio in 2016, which is the biggest in the last five years.

Regarding the demand for infrastructure fund, government of Indonesia is eyeing long term managed fund in institutional investors such as pension fund and insurance. The first coercive way is to increase the quantitative regulation of direct investment. Direct investment quantitative regulation then, by Financial Service Authority Regulation No. 3 of 2015 of Pension Funds Investment, increases into 15% of total investment. Abroad investment is also allowed by 5% only. Direct investment in infrastructure is facilitated by PINA scheme with the main aim is to fulfil the equity demand of green field projects. Other investment product is also in developing to attract pension fund's involvement in infrastructure, namely perpetual bond and limited participation fund (commonly known as private equity fund). Infrastructure bond, an instrument specific for infrastructure investment, is still on underwriting by OJK.

**One Digit Interest Rate Policy**

Bank interest rate is a significant element of investment. Either for deposit or credit, investors will look up bank interest rate as one of critical components for investment decision making. Concerning pension fund and infrastructure, bank interest has its opposite side respectively. High bank interest rate will attract more saving and deposit from pension funds since, by qualitative regulation, pension funds are allowed to put their 100% total investment in saving and deposit instruments. Whereas, infrastructure investment will need lots of money, considering that infrastructure is high cost, so that low bank interest rate, fixed for certain years if possible, is highly attractive. Credit bank interest rate in Indonesia has been quite high.

Table 4.1 Credit Interest Rate 2011-2015

| Group of Bank | Credit Interest Rate | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2011 | | 2012 | | 2013 | | 2014 | | 2015 | |
| | Lowest | Highest | Lowest | Highest | Lowest | Highest | Lowest | Highest | Lowest | Highest |
| Commercial | 10.39 | 10.71 | 9.86 | 10.21 | 10.04 | 10.84 | 10.91 | 11.48 | 11.35 | 11.49 |
| Local Government | 12.40 | 12.55 | 11.24 | 12.37 | 12.18 | 12.27 | 12.18 | 12.38 | 12.13 | 12.52 |
| National Private | 12.64 | 13.21 | 11.88 | 12.58 | 11.67 | 12.51 | 12.63 | 13.13 | 12.77 | 13.06 |
| International | 10.06 | 14.89 | 8.93 | 9.71 | 9.43 | 10.71 | 10.78 | 11.04 | 10.60 | 11.13 |
| General | 11.97 | 12.25 | 11.24 | 11.73 | 11.14 | 11.82 | 11.92 | 12.39 | 12.12 | 12.32 |

Source: BPS-Statistics Indonesia (2017)

Looking up at the table above, two digit of credit bank interest rate is attractive to saving and deposit, while very unattractive for investors who need lending money. As economy can only be moving with productive activities, meaning lot of credit from bank, Indonesia by 19th August 2016 launched Bank of Indonesia 7-day Repo Rate. This fix bank interest rate will push banks to adjust their interest rate into one digit rate. Consequently, rate interest for saving, deposit, and credit will eventually decrease. Investors will gain more access to credit, while institutional investors will think over their saving or deposit in banks. This BI Repo Rate began at 5.25% on August 2016.

Months before, on 16th March 2016, OJK already regulated the capping for deposit. Deposit interest must be maximal 0.75% above BI Repo Rate. With the likely interest rate of maximal 6.00%, infrastructure investment with higher, stable, and long-term expected returns will be a good option of pension funds investment.

***Non-Coercive Approach***

The non-coercive approach is a complement for coercive ones in order to archive the policy aim efficiently. Mulder (2004: 37) analyzes the non-coercive approach in the term of the influence-ability dilemma. This dilemma consists of two interrelated issues. The first issue concern with the power of non-coercive approach itself. This issue will likely be what Mulder described as underinvestment, this is where investors do not invest as much as expected.

> "First, since non-coercive instruments necessarily leave considerable degree of freedom to the private sector (in this case with respect to the decision to invest or not), there exists a serious risk that the private sector does not respond according to the plan" (Mulder 2004: 37).

The second issue regards with whether the guarantee of a supposed attractive project leads to an expected response. Led by the probability of underinvestment occurrence, the economic logic is that investors will only invest for an attractive project. However, an attractive project does not basically leading to the willingness to invest since barriers to investment may still exist or the risk is too high to bear. The source of underinvestment, based on level of analysis, can be seen below.

Table 4.2 The Source of Underinvestment

| Level of Analysis | Source of Underinvestment |
|---|---|
| Micro or firm level | Wrong incentives for management to invest |
| | Uncertainty on return of investment with an option to wait |
| | Debt-to-equity ratio |
| | Stock-market performance of the firm |
| | Agency approaches to underinvestment |
| Meso or sectoral level | Strategic underinvestment and the signaling game |
| | Incomplete contracts and the hold-up problem |
| | Contract renegotiation and the hold-up problem |
| | The role of competition |
| | Declining product-market |
| Macro or country level | Savings gap, hyperinflation, and capital flight |
| | Profits and price cap regulation |
| | Liberalization, regulatory reforms, and the vertical separation of the value chain |
| | Franchise bidding, concessions, and licensing |
| | Policy reforms, and the expropriation risk |

Source: Mulder (2004: 43)

However, a non-coercive approach is the logical economic internal making decision of investment. As an effect, it is a crucial thing regarding investors' will in shaping a new strategic investment plan to match government's wish accordingly. It is where encouragement really works in the field. Regarding the plan to attract pension funds' involvement in infrastructure investment, government of Indonesia establishes some non-coercive approach in the form of policies and conducts.

**Put Infrastructure First**

Political willingness is a trigger for action. The 2015-2019's Joko Widodo administrative is putting infrastructure development as its main priority. The non-coercive approach will focus only in the economic policy packages.

Table 4.3 Economic Policy Packages

| Package | Policy Resume |
|---|---|
| 2015 | |
| 1 | Deregulate 165 regulations, fasten license mechanism for land and infrastructure project, strengthen land ownership law, determine the approved complete license documents |
| 2 | Simplify license for industry area, decrease duration for tax allowance and tax holiday, erase value-added tax for transportation vehicle. |
| 3 | Decrease fuel price, gas, and base tariff of electricity for industry, simplify land license for investment |
| 4 | Fixed labour and wage system, broaden credit for micro level |
| 5 | Decrease tax and asset revaluation for firms, SOEs, and individual |

| | |
|---|---|
| 6 | Simplify investment procedure for special economic area (KEK), encourage paperless mechanism |
| 7 | Decrease income tax for intensive labour project |
| 8 | One map policy, fasten oil well project, give incentive for maintenance firms |
| 2016 | |
| 9 | Support electricity development acceleration |
| 10 | Launch Investment Negative Index (DNI) |
| 11 | Launch Indonesia Single Risk Management (ISRM) for fluid flow of goods |
| 12 | Deregulate license for a new investment from 94 to 10 procedures |
| 13 | Simplify duration for obtaining license for poor housing project |

Source: KPPIP (2017)

The economic policy packages were indeed an integral part for supporting infrastructure development, even though some packages might not specifically support infrastructure investment.

**A New Investment Scheme: PINA**

Private sector participation in public goods provision in Indonesia began with the introduction of privatization and currently under public private partnership scheme. The slow rate of public private partnership scheme leads government to seek out other possible source of fund. Institutional investors, such as pension fund and insurance, are becoming a potential target. The lesson learned of abroad pension funds' involvement in infrastructure, the general widely assumption for pension fund's matching liability of infrastructure, and the huge potential funds are supporting PINA's establishment. However, learning the sophistication of infrastructure investment, government aims PINA policy for filling up the insufficient equity for the already on-going projects.

> "Grand design PINA comes from the financing gap for infrastructure development in the period of 2015-2019. PPP is on its way, however pure private sector participation is not smoothly run due to a deadlock of market mechanism. Too many on-going projects experience insufficient equity so that credit is hard to obtain" (PINA Facilitation Center, 2017).

PINA scheme focuses on long-term managed funds for financing the economic and financial feasible on-going projects. Over the years of private sector involvement in public goods provision, the most attractive infrastructure investment project is toll road due to the fast growing number of private vehicle ownership and the easily measurement of return of investment. PINA was launched on 27$^{th}$ February 2017 along with the announcement of financial close for pension fund SOE's PT. TASPEN investment in PT. Waskita Toll Road which is having concession for 15 toll roads, in which 8 roads are in Java island and 5 roads are Trans Java Toll.

**Non-Bureaucratic Investors' Facilitation Session**

The most structural problem of private participation is the lack of champion at the top (Committee for Acceleration of Priority Infrastructure Delivery/KPPIP 2015). Infrastructure is so vary and be diffused into several ministry. Public works infrastructure consist of roads, toll, dam, and related goods are under Ministry of Public Works and Housing. While airport and seaport are under

Ministry of Transportation. In a project preparation, BAPPENAS is in charge, whereas KPPIP is exclusive to national strategic projects. As a result, coordination is very hard to do. PINA scheme basis is business to business model, where government, in this case BAPPENAS, acts as a facilitator. This facilitation takes in the form of PINA Facilitation Center, in the same building of BAPPENAS, without any formal member for any ministries. Meeting is conducting in more fluid condition and more open to investors who seek for equity addition to their on-going projects.

**SOE is apparently the Only Capable Actor**

Developing countries are in need of more resources in term of capital and human power for aggregating its economic activities. As a result, the state could not let the economic works on its own and might as well becomes an active actor in the form of firm or company called state-owned enterprise. Despite its firm status, Peng et al (2016:5) argues that SOE cannot be featured in existing theories of the firm. There are two issues confirming this argument. The first issue relates to the basic assumption of profit maximizing as a prominent firm's characteristic which is not wholeheartedly embraced by SOE. According to Law No. 19 of 2013, SOE in Indonesia aims to support national economic development and state revenue at its best. Profit is its second aim. The second issue is due to the fact of SOE ownership which is coming from the ideological debate between socialism versus capitalism. SOEs which are already opened as a listed company in the capital market may be owned by private, typically with government as a major shareholder. However, some SOEs with their distinctive economic sector may solely be 100% owned by the government. Consequently, SOEs' position in the economic sector is very different with pure private firms and in some cases eventually they take a domineering economic power in the market.

The issue of ownership is very important because it leads to SOE's economic strategy and plan which subsequently heads to its performance and merit. According to Law No. 19 of 2003, SOE is defined as an enterprise with all or most of its capital, minimal of 51% share, is owned by the state. The different between private and state ownership can be seen as follow:

Table 4.4 The Differences Between Private and State Ownership

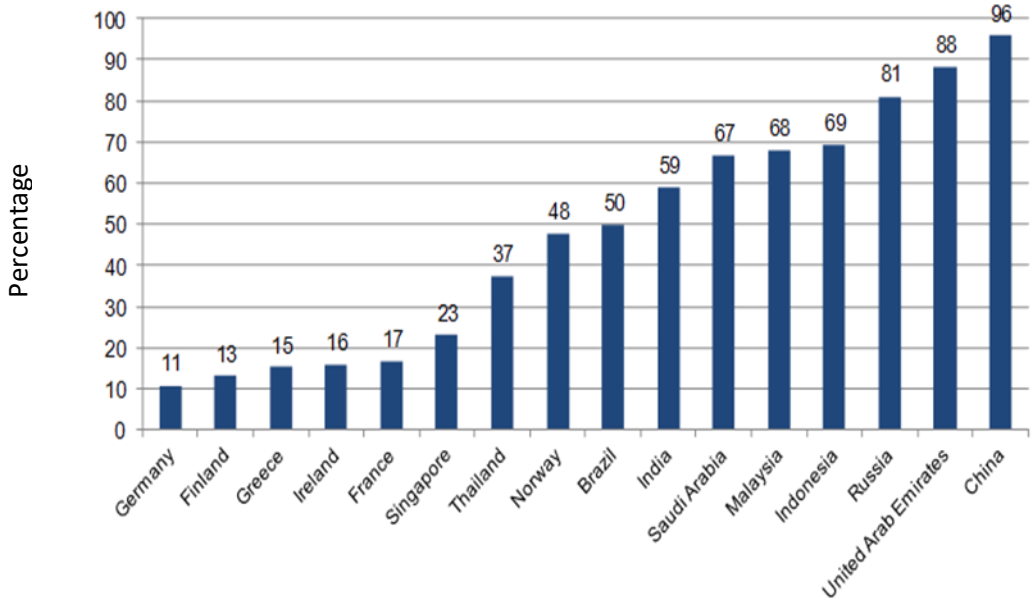
| | **Private Ownership** | **State Ownership** |
|---|---|---|
| Objective of the firm | Maximize profits for private owners who are capitalists (and maximize shareholder value for shareholders if the firm is publicly listed) | Optimal balance for a "fair" deal for all stakeholders. Maximizing profits is not the sole objective of the firm. Protecting jobs and minimizing social unrest are legitimate goals. |
| Establishment of the firm | Entry is determined by entrepreneurs, owners, and investors. | Entry is determined by state officials and bureaucrats. |
| Financing of the firm | Financing is from private sources (and public shareholders if the firm is publicly traded). | Financing is from state sources (such as direct subsidiaries or banks owned by the state). |
| Liquidation of the firm | Exit is forced by competition. A firm has to declare bankruptcy or be | Exit is determined by state officials and bureaucrats. Firms deemed "too big to fail" may be |

| | | |
|---|---|---|
| | acquired if it becomes financially insolvent. | supported by taxpayer dollars indefinitely. |
| Appointment and dismissal of management | Management appointments are made by owners and investors largely based on merit. | Management appointments are made by state officials and bureaucrats who may also use non-economic criteria. |
| Compensation of management | Managers' compensation is determined by competitive market forces. Managers tend to be paid more under private ownership. | Managers' compensation is determined politically. Managers tend to be paid less under state ownership. |
| Ownership boundaries | Privately owned firms can be nationalized and turned into SOEs. | SOEs can be privatized. Even for SOEs in which state ownership is unchanged, they are not necessarily "state-owned and state-controlled". |

Source: Peng et al (2016: 7)

SOEs have their domineering place in Indonesia's economy. Indonesia's SOE presence in the market place is number fourth in the world.

Figure 4.3 SOEs in the Market




Source: Kowalski et al on Buge et al (2013)

In order to understand the institutional framework of SOE's pension fund involvement in infrastructure sector in Indonesia, the analysis will refer to Hollingsworth's (2000: 598) level of institutional analysis. There are five component needs to be assessed, namely the institution, the institutional arrangements, the institutional sectors, organizations, and out puts and performance.

a. Institution

The institution refers the rules and values exist between state and SOE relationship. As mentioned earlier, SOE is owned by the state. As it is, the state has absolute if not majority power, depending on the shareholder percentage, to decide the grand business plan. State and SOE are captured in the principal-agent theory relationship where SOE as an agent should do its best ability to the best interest of the state (principal). Underinvestment is unfavourable lest the principal agent problem may arise.

b. Institutional Arrangement

Institutional arrangement can be understood in two dimensions, namely: the nature of action motive and the distribution of power (Hollingsworth 2000: 606). The state has an institutional arrangement quite distinctive than other actors.

> "It is the state that sanctions and regulates the various non-state coordinating mechanisms, that is the ultimate enforcer of rules of the various mechanisms, that defines and enforces property rights, and that manipulates fiscal and monetary policy" (Hollingsworth 2000: 609).

The state's nature of action motive is based on its role to ensure welfare to all the citizen. After all welfare state is a famous concept of government. Regarding the distribution of power, the state has its edge with the allowance of coercive conduct.

On the other side, SOE's action motive is based on becoming the agency and pioneer for economic activities where full private sector role is scarcity, essential, special, and impossible (Greene 2014: 5). Whereas in the distribution of power, SOE can be seen as a regular firm, but with some boundaries and privileges, stated in regulations, in which give them a more advantage edge than a pure private firm.

c. Institutional sector

Institutional sector relates to the existing system of a certain sector that has been existing and in evolving stage time to time. Referring to investment, the financial and business system maybe the related institutional sectors. Patidar (2017) explains that "financial system is a mechanism that works for investors and people who want finance". The financial system covers the institutions, markets, instruments, and services undergone in the specific investment. Infrastructure as a complex project makes financial system for this sector is limited, long-term, high cost, and high risk.

Whereas business system concerns with a framework where a company can formulate a set of action to achieve its goals and probably use it to evaluate the business choice at each stage of creating and delivery of service (Coyne 2009). In the pension funds business, risk management is the core of business system. Risk management is clearly defined for pension funds investment in OJK regulation No. 3 of 2015.

d. Organization

Organization refers to the specific characteristic that defines one organization to the greater institution system in term of structure and values. Hollingsworth (2000: 621) says that:

> "In those societies in which the institutional norms, habits and rules are most developed and in which the institutional pressures to conform are greatest, there is less variation in the structure and culture of business firms and various kinds of research organizations".

As developing countries experience with the low strength of institution, the establishment of a new organization needs more time to be institute in the society. The newly organizations usually have a very detailed task which may interrelated with established organization.

In Indonesia context, pension fund is not mandatory. Generally speaking, when talking about pension fund, people will only refer to pension fund made for civil servants. Only lately when the Law of Social Service Security Net was delivered in 2004, that private sector, particularly the big and medium business category, is mandatory by law to arrange pension fund for their employee. However, the high number of informal business category may hinder the institutionalization of pension fund for private sector.

e. Outputs and Performance
   This level is where institutional components are more practical and flexible (Hollingsworth 2000: 622). In a certain sector, there are policies, statutes, products, services and so on. Government introduces policy, new scheme of investment, and regulations. Pension fund as a SOE and firm has to adapt to the new outputs in order to maintain its goals. Some business plan maybe adjusted, rewritten, or redesigned to meet the new policy demand.

***Favourable Privileges toward SOE***

**The Political Support**

Infrastructure is high-up front capital requirement and is considered public good. As legally be mandated as a pioneer of national economic development, SOE by design has become the main actor in infrastructure market. GAPENSI, an Indonesia's construction firm association, examined that in 2016, the infrastructure projects conducted by SOE was nearly 80% (Syarizka 2016). An evitable and logical choice, but unresponsive for pure private sector's involvement.

> "… of course pure private sector is very welcome, but they don't have capital and experience for big infrastructure projects, so that there is almost no choice, logically and economically, but to endorse SOE as an infrastructure agent …" (PINA Facilitation Center 2017).

Politically speaking, the heavy leaning toward SOEs was verbally acclaimed by Minister of SOE:

> "SOEs are prioritized to enhance infrastructure investment in order to build road, sea, and air connectivity" (Minister of SOE, 19 December 2016 as written by Sinaga 2016).

The emphasize of SOE's involvement is due to huge infrastructure agenda that legally written on President Regulation No. 3 of 2016 regarding acceleration of 225 national strategic projects, in which 101 projects are infrastructure. Furthermore, the state's ownership of SOE has made the relation between them is very political. Sunarsip (2011) observes that because of this ownership, infrastructure project execution by SOE is based on state interest and not vested interest, even though SOE's independency is already legally defined in Law No. 19 of 2003.

**Special Duty Assigned by Law**

With the long list of strategic infrastructure projects as much as IDR 4.769,2 Trillion, government does endorse SOE as the pull trigger for infrastructure investment. Legally and generally, this policy is supported by Law No. 19 of 2013 in which SOEs must support economic development, deliver public goods provision, and become a pioneer when pure private sector is unable to fulfil their supposed participation. Legally and specifically, government issues special duty assigned regulations for certain SOEs in infrastructure project. In addition, as connectivity is the main agenda of Joko Widodo's administration, Ministry of Transportation takes a legal plan of SOEs' involvement in infrastructure, particularly in transportation sector: airport and seaport, by portraying SOE's involvement in the transportation road map.

Table 4.5 SOE on Special Infrastructure Duty

| President Regulation | SOE on Duty | Project |
|---|---|---|
| No. 100 of 2014 | PT. Hutama Karya | Trans Sumatera Toll Road |
| No. 116 of 2015 | PT Waskita Karya | Light Rail Transit in South Sumatera Province |
| No. 81 of 2017 | PT. Hutama Karya | Tanjung Priok seaport toll access |

Source: the Author

## 4.2 Willingness to Invest

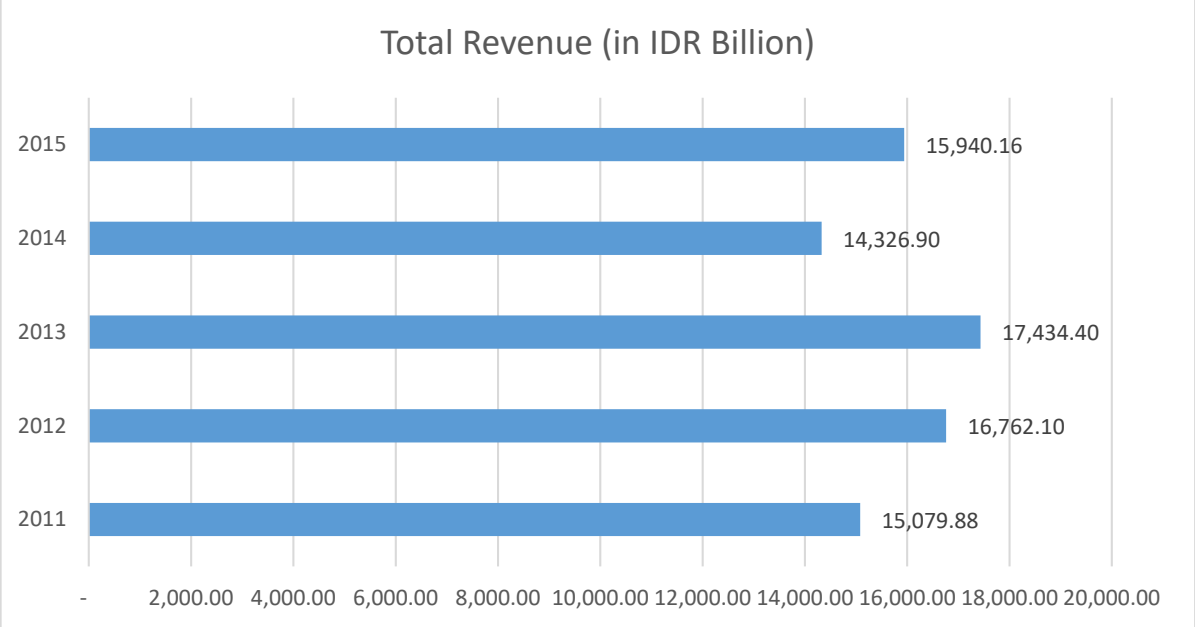
***The Business Assessment***

**SOE Pension Fund's Profile**

PT. TASPEN (Persero) is a SOE pension fund with 100% shares solely owned by government of Indonesia. This unlisted stock exchange market enterprise serves for civil servants and since 2014 its subsidiary, PT. Taspen Life, serves for individual participants. Pension fund payment is based on the Law No. 11 of 1969. This regulation mandates a contribution scheme from the Employer, however "Pay As You Go" method is still adopted for payment with fund originated from State Budget (PT. TASPEN Annual Report 2015).

In the period of 2011 to 2015, prior to engagement in infrastructure investment, PT. TASPEN's total revenue reached IDR 15.940,16 billion.

Figure 4.4 PT. TASPEN's Revenue




Source: PT. TASPEN Annual Report 2015

Moreover, PT. TASPEN was graded excellent or "AA" for the company health index in 2015. Below is the financial ratio of PT. TASPEN at the end of 2015. The funded ratio of 101.27% showed that this pension fund company is in a great shape, that the value of its assets is greater that the value of liabilities.

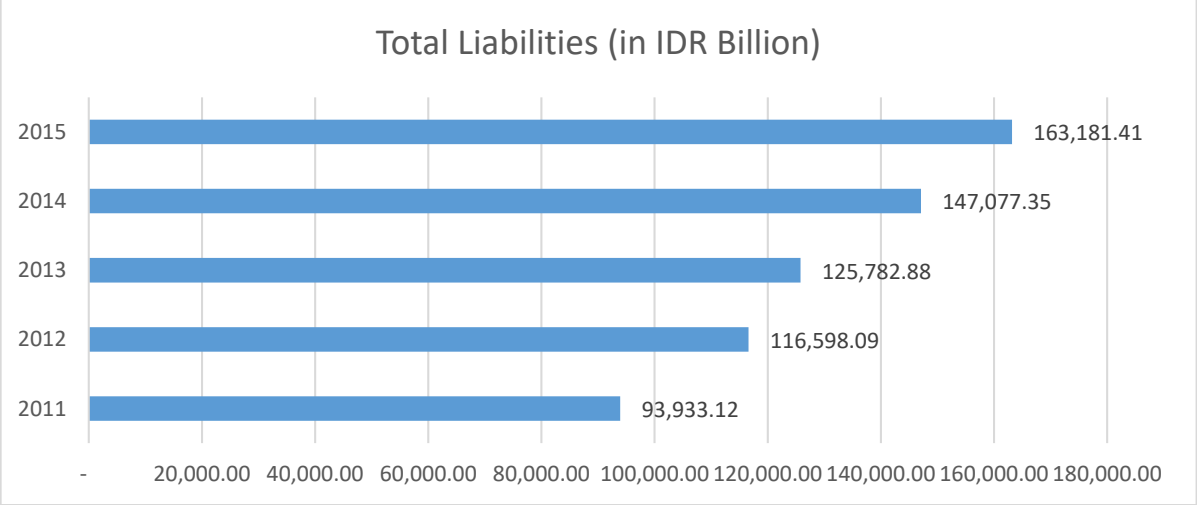
Table 4.6 PT. TASPEN's Financial Ratio

| **Financial Ratio (in %)** | **2015** | **2014** | **2013** | **2012** | **2011** |
|---|---|---|---|---|---|
| Return On Assets (ROA) | 0.70 | 4.56 | 1.91 | 0.70 | 1.13 |
| Return On Equity (ROE) | 4.92 | 28.64 | 11.13 | 3.11 | 6.61 |
| Solvency | 12.14 | 21.64 | 16.63 | 25.25 | 29.12 |
| Funded Ratio | 101.27 | 113.97 | 73.17 | 82.45 | 83.89 |
| Yield on Investment (YOI) | 9.83 | 11.20 | 9.40 | 10.10 | 10.47 |

Source: PT. TASPEN Annual Report 2015

The total liabilities over 5 years long is seen as below.

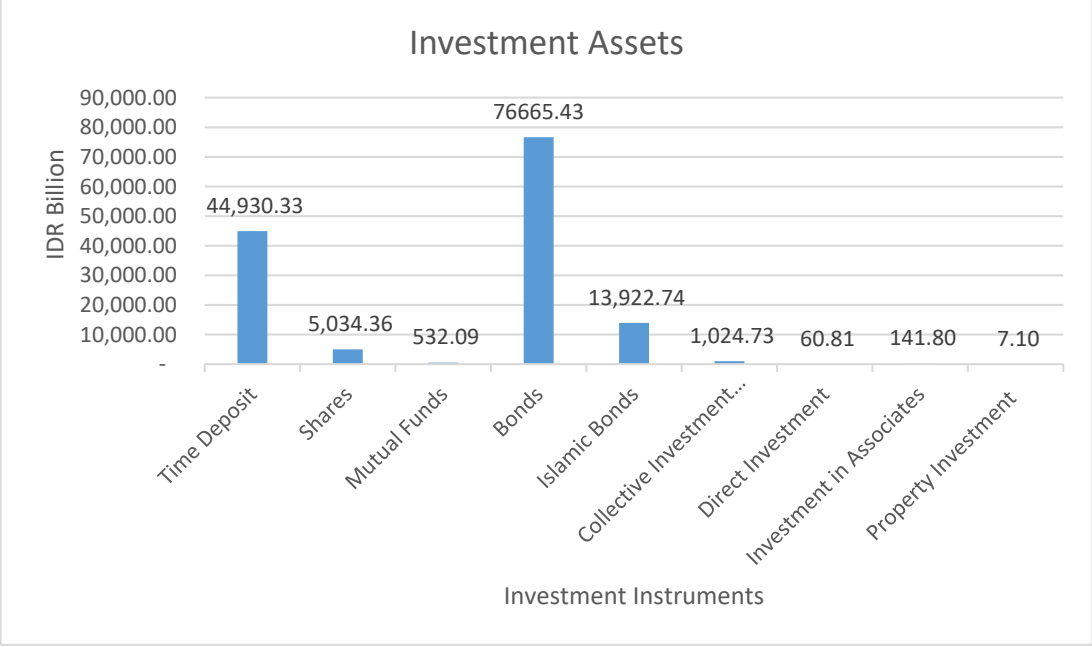
Figure 4.5 PT. TASPEN's Total Liabilities




Source: PT. TASPEN Annual Report 2015

Despite this good performance, PT. TASPEN's portfolio is majority placed on bonds. Pension fund investment comes from pension program and retirement savings (THT) with distinctive regulations. For an instance, pension program can spend 10% of total investment in direct investment, whereas THT is capped to 5%. Investment assets in the end of 2015 is as followed.

Figure 4.6 PT. TASPEN's Investment Assets




Source: PT. TASPEN Annual Report 2015

PT. TASPEN's market share is captive that in turn it affects the company's marketing strategy and is capped growth of participants depending on government's number of employment.

**The Agency behind Diversification Policy**

Investment strategy is an economic, policy, and risk-taking sensitive action.

a. Macro-economic Condition and BI Rate

Indonesia's economic condition had continued to slow down in 2015 as a result of the global condition. The domestic economic growth was under expectation and the domestic inflation was low below state budget plan. As examined on PT. TASPEN Annual report 2015, Bank of Indonesia addressed the issue by lowering the primary level Statutory Reserves from 8.0% to 7.5% and also maintaining BI rate at 7.5%. The interest for deposit facility was 5.5%, while lending facility was 8.0% (PT. TASPEN Annual Report 2015). Understanding the challenging situation, less-risky investment were chosen by investors which resulted in the drop of Composite Share Index Price (IHSG) where bond price index based on IBPA Government Gross Price decreased by 4.91% as mentioned in PT. TASPEN Annual report 2015. The expected returns of government bonds investment then subsequently decreased.

b. Age Limit Retirement and New Insurance Policy

Government issued the increase of civil servant age limit retirement from 56 years old to 58 years old in 2014. This age limit policy declined the total claim payment and expenses for liability reserves to the participant (PT. TASPEN Annual Report 2015). In addition, PT. TASPEN also obtained another source of revenue (premium) as government issued Government Regulation No. 70 of 2015 about Work Accident Insurance and Death Security Programs for State Civil Apparatus. At the same time, several government projects were in deadlock because of insufficient equity and government was on reviewing the potency of pension fund's involvement in infrastructure through a new investment policy.

c. A New Investment Strategy and Corporate Governance

Since 95% PT. TASPEN's investment were placed on deposits and bonds, in which affected by BI Rate decrease, a new strategy should be invented. The Board of Directors proposed a new strategy in seizing the business prospect by choosing investment diversification policy through direct investment instruments particularly in infrastructure (PT. TASPEN Annual Report 2015). The diversification policy was supported by the establishment of investment committee on 29th June 2015.

> "The new strategy to be implemented by the Company to anticipate the interest rate decrease is to increase the amount of direct investment" (PT. TASPEN Annual Report 2015: 36).

A new strategy needs a new different governance. Regarding the concern in direct investment, PT. TASPEN established Strategic Business and Direct Investment Division of which actively be assigned to generate a direct investment plan. This new corporate governance inevitably put PT. TASPEN to take more active part in direct investment, to optimize the fee-based income, and to establish new subsidiary (PT. TASPEN Annual Report 2015).

**Project Profiling**

There are 18 toll roads under PT. Waskita Toll Road, in which 8 of them are in Java Island, and 5 of them are Trans Java Toll. This project profile is only covered for 3 of Trans Java Toll under PT. Waskita Toll Road concession in which PT. TASPEN is a shareholder.

a. Pejagan-Pemalang

Pejagan-Pemalang Toll is a national strategic project located in Central Java and is about 57.5 km long. This project is conducted with full private finance with total investment is IDR 6.840 Trillion (status: KPPIP 2017). The road will connect Brebes to Pemalang District and is the next connection of Kanci-Pejagan toll road. The planned construction commencement was in September 2011, while the planned commercial operation date is in 2018. Concession period for this segment is for 45 years. Pejagan-Pemalang toll consist of four sections namely:

Table 4.7 Pejagan-Pemalang Current Status

| Section | Line | Status (of 2017) |
|---|---|---|
| I | Pejagan-West Brebes | Operation |
| II | West Brebes-East Brebes | Operation |
| III | East Brebes-East Tegal | Construction |
| IV | East Tegal-Pemalang | Construction |

Source: KPPIP (2017)

Initially this project was acquired by MNC Investama, but the concession then is sold to PT. Waskita Toll Road, a subsidiary of PT. Waskita Karya, a SOE construction firm. This toll road is expected to sustain Java's northern highway which is economically strategic economic line in Java Island and in Indonesia (KPPIP).

Table 4.8 Pejagan-Pemalang Financial Data

| Financial Data | |
|---|---|
| Investment Cost | IDR 2.34 Trillion |
| Construction Cost | IDR 1.55 Trillion |
| Investment Rate Returns | 16.50% |
| Projected LHR | |
| 2016 | 16.375 cars/day |
| 2017 | 19.070 cars/day |
| Concession period | 45 years |
| Expected tariff | IDR 840/km |

Source: PT. Bahana Securities on Setiadi (2015)

b. Solo-Ngawi

Solo-Ngawi Toll is a national strategic project and one of Trans Java Toll networks. Located in Central Java, this road is 90 km long. This project is conducted through public private partnership scheme with total investment is IDR 5.140 Trillion (status: KPPIP 2017). Planned construction commencement date was January 2012, whereas planned commercial operation date is in 2018. Government is taking participation for finance in land acquisition and

construction of 1 out of 4 road sections. The partnership between public and private is shown below:

Table 4.9 Solo-Ngawi Funding Status

| Section | Line | Funding |
|---|---|---|
| I | MYC | Government |
| IA | Colomadu-Karanganyar | Government |
| IB | Colomadu-Karanganyar | Government |
| III | Solo-Mantingan | Private |
| IV | Mantingan-Ngawi | Private |

Source: KPPIP (2017)

Initially PT. Thiess Contractor Indonesia was the investor, but then acquired by PT. Waskita Toll Road. This road is projected to be the main route for distribution of passengers, goods, and service which will connect Central and East Java area.

Table 4.10 Solo-Ngawi Financial Data

| Financial Data | |
|---|---|
| Investment Cost | IDR 4.438,63 Million |
| Investment Rate Returns | 17.40% |
| Projected LHR | |
| 2010 | 7.725 cars/day |
| Concession period | 35 years |
| Expected tariff | IDR 500/km |

Source: Feasibility Study Department of Public Works on Naimah (2009)

c. Ngawi-Kertosono

Ngawi-Kertosono is 87 km long road located in East Java. This national strategic project is conducted through public private partnership with government funding participation in 1 out of 4 its sections. Planned construction commencement date was January 2012 and planned commercial operation date is schedule in 2018. The investment project is IDR 3.830 Trillion (status: KPPIP 2017). This road segment consist of four section:

Table 4.11 Ngawi-Kertosono Funding Status

| Section | Line | Funding |
|---|---|---|
| I | Ngawi-Madiun | Private |
| II | Madiun-Caruban | Private |
| III | Caruban-Nganjuk | Private |
| IV | Saradan-Kertosono | Government |

Source: KPPIP (2017)

This segment is under PT. Waskita Toll Road concession and a part of Trans Java Toll. Ngawi-Kertosono is aimed to have an important role in propelling economic activities between Central to East Java area.

Table 4.12 Ngawi-Kertosono Financial Data

| **Financial Data** | |
|---|---|
| Investment Cost | IDR 3.609,51 Million |
| Investment Rate Returns | 17.50% |
| Projected LHR | |
| 2010 | 9.320 cars/day |
| Concession period | 35 years |
| Expected tariff | IDR 500/km |

Source: Feasibility Study Department of Public Works on Naimah (2009)

**Scaling Decision Making to Invest**

Harcourt et al on Virlics (2013: 170) examines that "the decision, whether to make an investment or not, depends upon the investor's profit expectation, the cost of the asset, and availability to finance the investment, and how to finance that". The decision to invest is also influenced by past profit experience and the projective future profit resulted of its risk assessment (Virlics 2013:170).

a. Capital

In order to invest, a company should assess its capital. Capital determines how much money should be spent as well as regulation restriction. As a consequence of longer age limit retirement and insurance policy for government officials, PT. TASPEN gains new sources of fund without any investment action and risk. These new sources of fund can be directed to a new investment instrument. PT. TASPEN's direct investment in infrastructure is by law restricted to 5% for retirement saving and 10% for pension program. The limitation capital for investment limits the choice of instrument and because of a new chosen investment instrument probably needs more trading cost. As infrastructure is a complex project and a new investment strategy, PT. TASPEN does need expertise advisory aside from economic investment expertise. A certain legal and investment advisory were established for this project which required more finance than the business as usual investment.

b. Objective

To invest is to gain returns. PT. TASPEN, however is a SOE body owned 100% by the government. This position binds the objective, that is, to activate national economic. PT. TASPEN's involvement is not only to invest, getting good returns if possible, but also to generate a model of private pension fund's involvement in infrastructure. Legally speaking, the decision to invest in infrastructure is written in the new investment strategy as part of PT. TASPEN's characteristic as a firm. Politically speaking, it is to support its role as government's body in private sector field.

c. Risk

Investment maybe spoken side to side with risk. A successful investment is likely a result of good risk assessment.

> "To choose the appropriate risk measurement tools, it is necessary to identify what counts as risk" (Virlics 2013: 173).

PT. TASPEN's risk management is based on and validated through Joint Regulation of Board of Directors and Board of Commissioners No. PD-04/DIR/2015 & KEP-01/DK-TASPEN/2015 concerning the Risk Management Guideline of PT TASPEN (PERSERO). The effectiveness of risk management will be self-assessed by internal risk management body and also by external assessors. In the case of this infrastructure project, legal and investment advisory is a combination of internal and external assessors.

Given the graph the way of thinking for pension fund's involvement, the risk assessment is based on political and economic perspectives:

***Political Risk***

**The Corruption**

In the domain of political and economic relations on investment businesses, the strength of institution is demanded. The institutional framework, either political or economic, has been undermined by the level of corruption, bribery, and collusion which in turns leading to uncompetitive nature of investment and finally pushing for the destruction of economic performance and institution. Infrastructure projects are mostly high cost, massive, and in relation to public delivery service with heavy government officials' involvement at least on the planning stage. World Bank (2010) reports that based on Transparency International poll, construction, the core industry of infrastructure, ranked as the industry most prone to corruption and another survey conducted by international firms disclosed that construction firms have higher probability to lose a contract due to bribery.

Corruption is believed to be a significant factor in firstly destroying economic development and secondly effecting the other formal institutions. OECD in its 2013's Issues Paper on Corruption and Economic Growth found that corruption has high correlation to the performance of public sector governance indicators, like the rule of law, government effectiveness, and regulatory quality which is why the amount of money loss may not as destructive as the loss of output due to misallocations of resources, distortions of incentives and inefficiency.

> "Most importantly, corruption undermines public trust in the government, thereby diminishing its ability to fulfil its core task of providing adequate public services and a conducive environment for private sector development. In extreme cases, it may entail the delegitimization of the state, leading to severe political and economic instability. The resulting general uncertainty is detrimental to private business' willingness and ability to commit to a long-term development strategy, lack of which makes sustainable development hard to achieve" OECD Issues Paper on Corruption and Economic Growth (2013: 2).

Corruption demands high cost economic transaction for bribery, negotiation, connection fee, and risk of agreement disorder form private sector. However, Nawatmi (2013: 66) notes that some people claim that corruption can decrease transaction cost due to the decrease of bureaucratic

niche. It should be understood that protocols and structures are usually abundant in countries with weak institutions.

In Global Competitiveness Index, institution is included in basic requirements as well as infrastructure, macroeconomics environment, health and primary education. Institutions pillar consists of 21 indicators, namely: property rights, intellectual property protection, diversion of public funds, public trust in politicians, irregular payments and bribes, judicial independence, favoritism in decisions of government officials, wastefulness of government spending, burden of government regulation, efficiency of legal framework in settling disputes, efficiency of legal framework in challenging regulations, transparency of government policy making, business costs of terrorism, business cost of crime and violence, organized crime, reliability of police services, ethical behavior of firms, strength of auditing and reporting standards, efficacy of corporate boards, protection of minority shareholders' interests, and strength of investor protection. Indonesia's index of institutions pillar, on a scale of 7, over the years is as followed:

Table 4.13 Indonesia's Pilar Institution Index

| Year | Rank | Pillar: Institutions |
|---|---|---|
| 2012 | 72 | 3.86 |
| 2013 | 67 | 3.97 |
| 2014 | 53 | 4.11 |
| 2015 | 55 | 4.09 |
| 2016 | 56 | 4.1 |

Source: WEF Reports 2012-2016

Indonesia's corruption perceptions index over the last 15 years does not show a good sign which is correlated with the level of institution index. As corruption is a major obstacle for doing fair business, full private sector participation maybe unconfident, thus be replaced by the domination of SOEs in primary large business. The corruption problem in Indonesia is widely known along with collusion and nepotism with the abbreviation of KKN (Korupsi, Kolusi, Nepotisme). The Law No. 28 of 1999 mandates for the banishment of corruption, collusion, and nepotism in every level of government activities. The corruption eradication is exclusively assigned to Corruption Eradication Commission which was established in 2002.

Table 4.14 Indonesia Corruption Perception Index and Growth Rate per GDP

| Year | Corruption Perceptions Index | | | | Growth Rate per GDP at Constant Market Prices |
|---|---|---|---|---|---|
| | Rank | | | Score | |
| 2000 | 86 | of | 90 | 1.7 | 3.4 |
| 2001 | 88 | of | 91 | 1.9 | 2.5 |
| 2002 | 96 | of | 102 | 1.9 | 3.1 |
| 2003 | 122 | of | 133 | 1.9 | 3.4 |
| 2004 | 137 | of | 146 | 2.0 | 3.7 |
| 2005 | 140 | of | 159 | 2.2 | 4.7 |
| 2006 | 130 | of | 163 | 2.4 | 4 |
| 2007 | 143 | of | 179 | 2.3 | 4.8 |
| 2008 | 126 | of | 180 | 2.6 | 4.5 |
| 2009 | 111 | of | 180 | 2.8 | 3.2 |
| 2010 | 110 | of | 178 | 2.8 | 4.9 |
| 2011 | 100 | of | 164 | 3.0 | 4.7 |
| 2012 | 118 | of | 174 | 32 | 4.6 |
| 2013 | 114 | of | 177 | 32 | 4.1 |
| 2014 | 107 | of | 174 | 34 | 3.6 |
| 2015 | 88 | of | 167 | 34 | 3.4 |

Source: International Transparency and BPS-Statistics Indonesia (2017)

Contrary to the institutional efforts conducted for corruption eradication, Indonesia's corruption perceptions index over the years has grown slow although leaning to the positive progress. The level of corruption shows its influence in economic market by the steady growth rate per GDP at constant market price. Along the years of 2000-2015, the maximum growth rate was 1.7% in 2009 to 2010 period. Inadequate supply of infrastructure does constrain the economic growth, unfortunately infrastructure investment itself may become the aching source for corruption due to its high cost entailment.

World Bank (2011: 8) identifies that corruption in infrastructure projects occur in three common forms, namely:

a. Collusion: agreement made by bidders to choose a winner among themselves
b. False documentation: false documents are submitted for a bidding contest
c. Fraud in a contract implementation: mark up on billing and materials often on a secret consented by project overseers.

The implementation of decentralized government in Indonesia since 2001 has given domain for local government in conducting non-national infrastructure projects which unfortunately has extended the spread of corruption in a lower level of government. Indonesia's presidential speech in 2012 found that political corruption happened in infrastructure sector. Corruption was developed in the decision making stage of infrastructure budgeting in the local governments. The political bargaining between local legislative and executive entities in budget assessment and the expectation of gaining benefit for infrastructure projects had led the political corruption in infrastructure happening institutionally. In a practical level, Commissioner of Indonesia Human Right Commission, Nasution as written by Sari (2015), claims that corruption in infrastructure projects often occur in land acquisition process.

The business to business scheme applied in this project allows minimum government's intervention in the investment transaction, thus minimize the possibility of uninvited corruption because of government officials' involvement.

**The Technical Aspect**

The huge demand for infrastructure fund has led government inventing various investment schemes. This will is carried on through coercive and non-coercive instruments. The introduction of concession system is the base foundation for private sector's involvement, while the change on pension fund investment regulation and one digit interest rate policy are coercive ways to make the investment possible. Non-coercive attitudes are displayed through the endorsement of investment friendly economic package policies and the establishment of business friendly government-investors meeting under PINA Facilitation Center. These actions are fully supported by politically and legally put infrastructure as the national development priority, launch PINA policy which fully focus on long-term managed funds, and build investing networks between SOE or private investors and BAPPENAS as government body with responsibility to generate infrastructure investment schemes. Politically speaking, president and minister of SOE openly encourage PT. TASPEN, as its position as a SOE and pension managed fund, to become a true investment manager and put infrastructure as part of its investment strategy.

***Economic Risk***

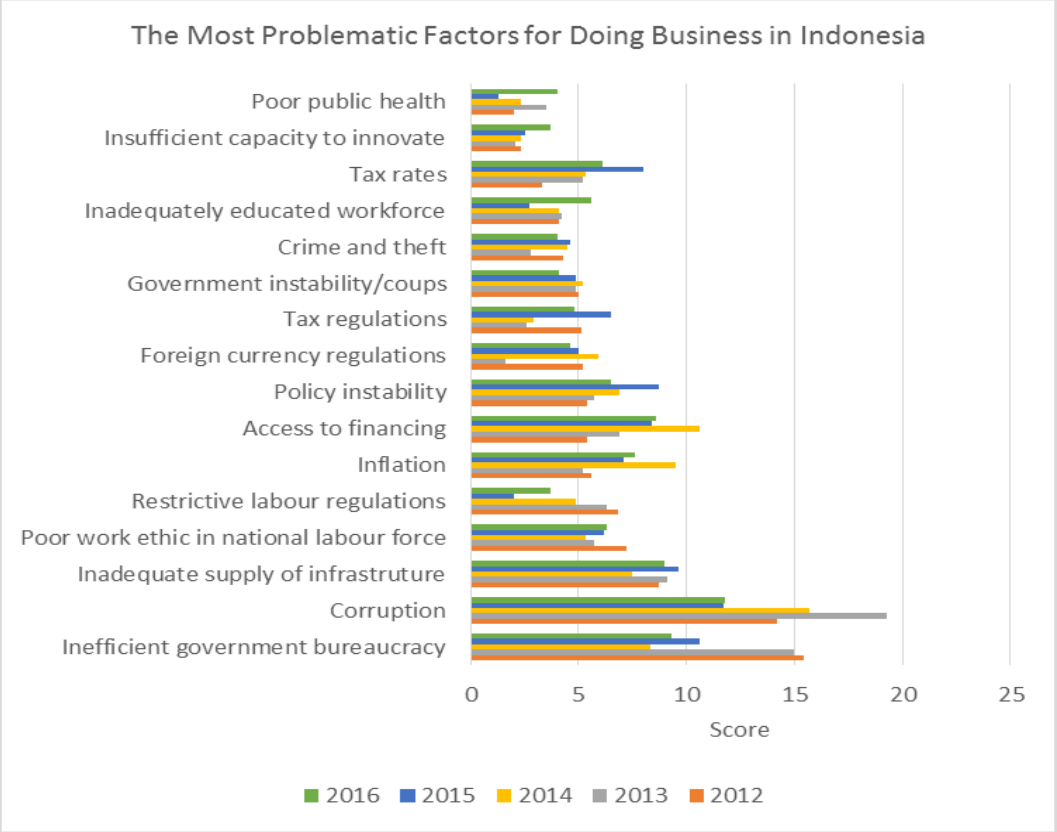
**Doing Infrastructure Business**

Decision making for investment, especially in infrastructure business, is not a purely private action. Infrastructure and its function for public service makes infrastructure a political economic project. Infrastructure projects usually establish formally in the form of a national policy that may overcome regime change. Inderst (2009: 24), based on Torrance's opinion, notes that pension funds should be aware of this "public" side, since it is inherently ''political' with various directions of government involvement.

Furthermore, pension fund itself is a very political institutional investor bounded by its function to give social security for public employees first then private employees later on. Pension fund's political vibe has made government invents qualitative and quantitative regulations much more restrictive compare to other institutional investors. As a result, the decision to invest is having more political vibe despite the clean conduct of risk economic assessment.

In general, conditions for doing business in Indonesia are influenced by some factors. Based on WEF Report, there are at least 16 indicators on assessing the level of conditions favourable for doing business and investment. There are 5 most problematic factors namely corruption, inefficient government bureaucracy, access to financing, inflation, and inadequate supply of infrastructure.

Figure 4.7 The Most Problematic Factors for Doing Business in Indonesia




Source: WEF Reports 2012-2016

**The Inflation**

As arranged under business to business PINA scheme, pension funds' involvement in this project should be aware of inflation rate history in Indonesia's economic. The chosen project profile shows a favourable investment rate of return beyond minimal requirement for private participation in infrastructure project. However, the macro-economic condition, perceived in the form of inflation rate, should be taken into account in order to estimate investment risk.

Looking over the inflation rate for making decision for investment is a must. Even so, an investor should look closely the sector growth rate of the chosen investment for a comprehensive and specific decision. The general macro-economic condition maybe unfavourable, however if the growth market of the chosen investment is acceptable then investment maybe a good decision.

Table 4.15 Inflation Rate and Construction Market Cumulative Growth Rate

| Year | Inflation Rate | Construction Market Cumulative Growth Rate (Quarter/Year) | | | |
|---|---|---|---|---|---|
| | | I | II | III | IV |
| 2005 | 17.11 | 7.52 | 7.92 | 7.6 | 7.54 |
| 2006 | 6.60 | 77.71 | 8.12 | 8.26 | 8.34 |
| 2007 | 6.59 | 8.3 | 7.92 | 8 | 8.53 |
| 2008 | 11.06 | 8.24 | 8.31 | 8.15 | 7.55 |
| 2009 | 2.78 | 6.27 | 6.17 | 6.7 | 7.07 |
| 2010 | 6.96 | 7.23 | 7.21 | 7.05 | 6.95 |
| 2011 | 3.79 | 4.63 | 5.94 | 5.85 | 6.07 |
| 2012 | 4.30 | 7.08 | 6.87 | 7.11 | 7.39 |
| 2013 | 8.38 | 6.78 | 6.69 | 6.53 | 6.57 |
| 2014 | 8.36 | 7.22 | 6.83 | 6.73 | 6.7 |
| 2015 | 3.35 | 6.03 | 5.68 | 6.08 | 6.36 |

Source: BPS-Statistics Indonesia (2017)

**The Technical Aspect**

Pure private or Public Private Partnership project will economically succeed if the internal rate returns of the project, according to Directorate of Urban Roads and Highways, is more than 12% (Merdeka 2008). Reviewing the covered example projects above, Pejagan-Pemalang's IRR is 16.50%. This project construction has been carried out through full private funding and Build-Operate-Transfer contract mechanism. Solo-Ngawi's IRR is 17.40% and is conducted with Supported Toll Road contract under PPP scheme. The IRR of Ngawi-Kertosono is 17.50% and also is conducted with Supported Toll Road contract under PPP scheme. Economically speaking, these projects are financially feasible.

## 4.3 The Favourable Set-Ups for Investment Decision Making

**Political Conditions**

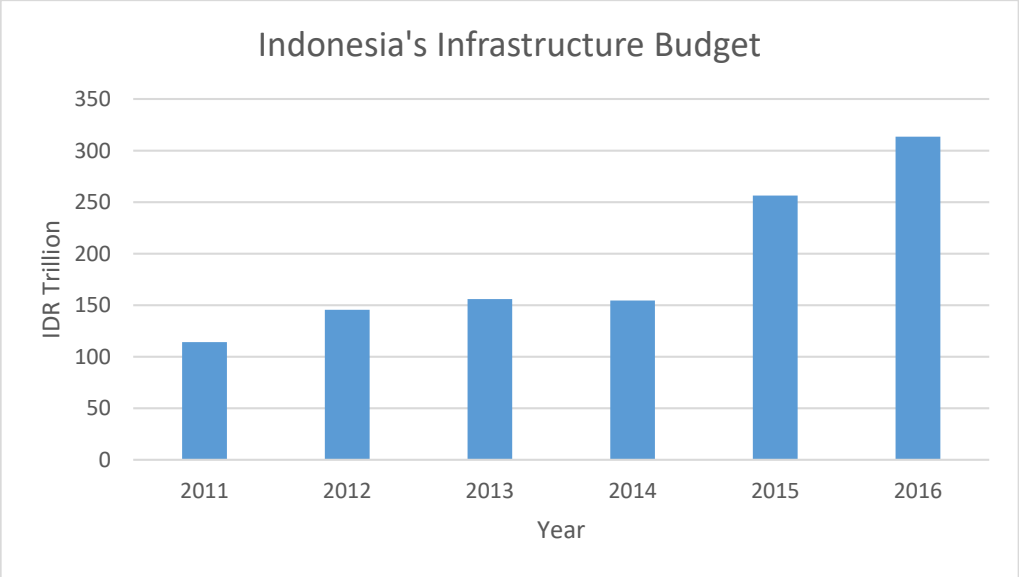
Toll Road concession under PT. Waskita Toll Road and PT. TASPEN is in Java Island with a quarter of them is National Strategic Project. Given the status, these projects, particularly with financial feasibility, are already politically guaranteed to be success. Investors will be more confident to be involved.

> "The status of PSN shows government's political commitment and investors, even from abroad, are interested and keen to join because of it" (PINA Facilitation Center 2017).

The guaranteed success refers to government political-economic standing to put infrastructure as its main agenda. In Joko Widodo's administration since the fourth quarter of 2014, infrastructure has become the first development main focus before human development and economic deregulation policy. Government budget on infrastructure is the indicator to justify its

main agenda. The leap of budget in 2014- 2015 was 39.68% and was 18.25% in 2015-2016. This increasing budget was numerically significant compare to 2011-2014 where the increasing budget was only around 6% and minus in 2014. Despite the improved and supported regulatory framework and policy, the focus on infrastructure has opened more opportunity for institutional investors to pay more attention to related investment instruments in infrastructure sector. Furthermore, this 2014-2019 administration is the first to acknowledge and encourage pension fund to fully play its role as an institutional investor in infrastructure projects.

Figure 4.8 Indonesia's Infrastructure Budget




Source: Ministry of Finance (2017)

**The Technical Institution**

One of issues of PPP conduct in Indonesia is the complicated mechanism coordination. This issue is so critical in the pre-construction stage since at this phase risk allocation is shared between partners. PINA scheme is based on business to business arrangement and the transaction is on the funding level. As a result, there is no bureaucracy mechanism involved. Government through PINA Facilitation Center takes a facilitator role in debottlenecking.

This single window coordination is favourable to investors since economic transaction with bureaucracy mechanism and the involvement of government officials may rise unexpected cost of time and money. Referring to the problematic factors in doing business in Indonesia, where corruption and inefficiency of government bureaucracy are the highest constraint, the single window coordination in the scheme of business to business model is agreeable to private investors.

Doing something new at the first time with the experience actors is benefitted to build confidence. Security on investment is a critical aspect since PT. TASPEN is a new investor in infrastructure investment. Despite the internal support of established legal and investment advisory, externally the benchmarked partners are giving a sense of security. PT. Waskita Toll Road is a subsidiary of PT. Waskita Karya, the SOE construction firm with the highest growth of profit in 2015. The other partner is PT. Sarana Multi Infrastructure, the only SOE whose role is to

be a catalyst for infrastructure investment. The benchmarked partners can be seen as a signal for new investors that the project is economically valuable and will be handled with high expertise which in turn guaranteed the project's success.

**Pension Fund Reform: The Lack of Future Consideration**

Chile and Colombia's experiences showed that pension fund reform was the engine for pension fund abundant resources which in turn generated their progressive involvement on infrastructure investment. Indonesia, however, despite the effervescent political support and regulation framework, does not starting the reform yet. In fact, the traditional Pay As You Go payment method based on defined benefit contribution scheme adopted by PT. TASPEN will rise debts for government budget to pay pensions in the future. Furthermore, the absence of defined contribution scheme tends to make pension funds taking a traditional approach to investment where infrastructure almost has no place on it.

Government of Indonesia politically and regulatory encourages pension funds' to be a true investment manager and be investing in infrastructure investment. Regarding Chile and Colombia's experiences, there is a significant step overlooked by Indonesia, namely the pension fund reform. This reform subsequently will shape pension funds as an investment manager by design. For the longer and expansive pension funds' involvement in infrastructure investment, Indonesia needs to set up its pension funds reform into motion. In addition, Indonesia's plan in generating infrastructure bonds may not be as successful as in Chile if pension reform is not immediately executed.

## Chapter 5
## Conclusion

Infrastructure investment defines as high cost but fruitful for long term achievement of states' competitiveness. Private sector participation has been highly sought by governments not only to encourage more effective and efficient public service delivery, but mostly due to the financing gap condition. Pension fund becomes one of targeted institutional investors in infrastructure investment because of its long term managed fund which is fitting with infrastructure investment period. However, the political vibe of infrastructure sector and the social-economic vibe of pension fund investment management have led the decision for infrastructure investment having both embedded political and economic considerations.

The involvement of pension fund in Indonesia's infrastructure sector comes into realization because of the pull and push factors of political and economic considerations leading to generate the decision to invest in infrastructure. The pull factors arise from government's efforts, while the push factors come as a result of the pension fund's dealing with government's efforts. The involvement of government initiative in encouraging pension fund's participation is an inevitable action. Government politically confirms with the verbal and legal supports for state-owned enterprises' involvement as a leading actor for infrastructure investment which is supported with related regulations and accommodated policies. Infrastructure is the main development agenda and state-owned enterprises become the tool to exercise it. In practice, the government takes both custodian and demiurge roles. One digit rate policy and higher quantitative investment regulation represents the coercive approach to develop the urgency for pension fund heading its investment business plan to infrastructure in the economic sense. Whereas PINA scheme and facilitation structure give legal and political support for pension fund's involvement. The project's economic and political standing as National Strategic Project accommodates pension fund's participation particularly in making sense its agency for diversification in a new investment instrument and sector. In addition, the new source of funding through longer age limit retirement and the establishment of new insurance policy along with benchmarked partners make the investment in infrastructure agreeable in term of finance assurance.

The government's involvement through political support, accommodated regulations, state-owned enterprises' preference, supported policies and structure together with the pension fund's dealing with economic situation, regulations and policies have triggered the development of pension fund use in infrastructure in Indonesia. However, other countries' experiences in encouraging the progressive step of pension funds' involvement in infrastructure investment show that the first foundation to shape pension funds' character as a true investment manager is the pension fund reform. Chile has managed its pension funds through three pillar scheme (solidarity pillar, mandatory contributory pillar, and voluntary contributory pillar) and the establishment of individual account system which have given abundant funds to be invested and left no enormous debt to pay by government. The infrastructure bonds was created as an answer to the demand of secure investment for pension funds. Moreover, the current initiative to increase alternative assets up to 15% is also a result of demand for a wider investment expansion. Colombia's pension reform also speaks in the same wavelength. The introduction of multi-fund system has helped shaping pension funds' daring approach to investment and has given more fund. In addition, the higher quantitative regulation is a result of pension fund's demand for a wider possibility of investment.

Indonesia, at the current state, succeeds in encouraging pension fund's involvement in infrastructure investment through political and economic supports. Nevertheless, the lack of pension fund reform and the single pillar scheme adopted may give constraints for longer expansion in infrastructure investment. The pension funds reform, which establishes into the adoption of multi pillar scheme in Chile or multi-funding system in Colombia, is an important foundation of shaping pension fund's determination as an institutional investor. Government of Indonesia may open the window for pension fund's investment in infrastructure, but the door is still locked up.

## REFERENCES


Abrego, M, D. Gutierrez (2016) 'Colombian AFPs Get Green Light to Increase Alternative Allocation'. Accessed 12 September 2017. <http://citywireamericas.com/news/colombian-afps-get-green-light-to-increase-alternative-allocation/a911093#i=1>

Adanza, E.G (1995) *Research Method Principle and Applications.* Manila: Rex Book Store.

Alonso, J, A. Arellano, D.Tuesta (2015) 'Factors that Impact on Pension Fund Investments in Infrastructure under the Current Global Financial Regulation', Madrid, June 2015, paper first presented at The Wharton School. University of Pennsylvania April 29/30, 2015.

Alonso, J, J. Bjeletic, C. Herrera, S. Hormazabal, I. Ordonez, C. Romero, D. Tuesta (2003) 'A Balance of Pension Funds Infrastructure Investments: The Experience in Latin America', *BBVA Working Papers Economic Research Department* No. 10/03.

Amaral, R (2010) 'Colombia's Pension Fund Market', Accessed <19 October 2017 https://www.professionalpensions.com/global-pensions/feature/1740343/colombia-s-pension-fund-market>

BAPPENAS (2012) 'Korupsi Menggerus Anggaran Belanja Infrastruktur Daerah/ Corruption Suppresses Local Government's Infrastructure Budget. Accessed 1 November 2017 <http://stranasppk.bappenas.go.id/korupsi-menggerus-anggaran-belanja-infrastruktur-daerah.html>

BAPPENAS (2015) 'National Mid-Term Development Planning 2015-2019'. Jakarta: Ministry of National Development Planning

BAPPENAS (2015) 'Kebijakan Kerjasama Pemerintah dengan Badan Usaha (KPBU)/ Public Private Partnership Policy', presentation at Infrastructure Workshop, Medan-Indonesia, 8 September 2015.

BAPENAS (2015) *Public Private Partnership/PPP Book 2009 – 2015.* Jakarta: Ministry of National Development Planning of Indonesia.

BAPPENAS (2017) 'Public Private Partnership, Infrastructure Projects Plan in Indonesia 2017', Jakarta: Ministry of National Development Planning of Indonesia.

BBVA (2008) 'Infrastructure Investment and Pension Funds in Latin America', paper presented at OECD/IOPS/RBA Global Forum on Private Pensions, October 31, 2008, Mombasa, Kenya.

Beckers, F, N. Chiara, A. Flesch, J. Maly, E. Silva, U Stegemann (2013) 'A Risk Management Approach to A Successful Infrastructure Project', *McKinsey Working Papers on Risk Number* 52.

Beeferman, L.W (2008) 'Pension Fund Investment in Infrastructure: A Resource Paper', *Capital Matters* No 3, December 2008.

Bloomberg (2016) 'Chile to Open Up a New Range of Investments to Pension Funds'. 13 October 2016. Accessed 19 October 2017 <http://www.pionline.com/article/20161013/ONLINE/161019926/chile-to-open-up-a-new-range-of-investments-to-pension-funds>

Bonaglia, F, R. Dellacroce, M. Moseley, F. Nunez (2015) 'Risk and Return Characteristics of Infrastructure Investment in Low Income Countries', paper presented at Development Working Group, Antalya, Turkey, 14-16 September 2015.

Bremmer, I (2009) 'State Capitalism Comes of Age: The End of the Free Market?', *Foreign Affairs*, Vol. 88, No. 3 (May/June 2009), pp. 40-55.

Bremmer, I (2010) 'The End of the Free Market: Who Wins the War between States and Corporations?', *European View* (2010) 9:249–252.

Buge, M, M. Egeland, P. Kowalski, M. Sztajerowska (2013) 'State-owned Enterprises in the Global Economy: Reason for Concern?, VOX CEPR's Policy Portal 2 May 2013. Accessed 15 September 2017 <http://voxeu.org/article/state-owned-enterprises-global-economy-reason-concern>

Cambridge English Dictionary (2017) Accessed 10 September 2017 <https://dictionary.cambridge.org/dictionary/english/pension-fund>.

Chang, H (2011) 'Institutions and Economic Development: Theory, Policy and History', *Journal of Institutional Economics* (2011), 7: 4, 473–498.

Chen, D (2015) 'State Capitalism vs. Private Enterprise', *Research Briefs in Economic Policy*, June 2015 Number 28.

Cerda, R.A (2007) 'The Chilean Pension Reform: A Model to Follow?', *Journal of Policy Modeling* 30 (2008) 541–558.

Coyne, K (2009) 'Enduring Ideas: The Business System'. Accessed 15 September 2017. <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/enduring-ideas-the-business-system>

Craciun, M (2011) 'A New Type of Risk in Infrastructure Projects', *Modern Economy*, 2011, 2, 479-482 September 2011. Accessed 14 June 2017 <http://file.scirp.org/pdf/ME20110400003_22357699.pdf>

Della Croce, R (2011) 'Pension Funds Investment in Infrastructure: Policy Action', *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 13.

Directorate of Infrastructure Investment Development (2015) 'Risk Management in Toll Road', presentation at Workshop Infrastructure, Serang-Indonesia 6 August 2015.

Evans, P (1995) *Embedded Autonomy, State and Industrial Transformation*. New Jersey: Princeton University Press.

Gomez-Lobo, A, S. Hinojosa (2000) 'Broad Roads in a Thin Country: Infrastructure Concessions in Chile'.

Gramlich, E.M (1994) 'Infrastructure Investment: A Review Essay', *Journal of Economic Literature*, Vol. 32, No. 3. (Sept 1994), pp. 1176-1196.

Greene, J (2014) 'State-owned Enterprises: Justifications, Risks, and Reform', paper presented at Fiscal Analysis and Forecasting Workshop, Bangkok-Thailand. June 16-27, 2014.

Hollingsworth, J.R (2000) 'Doing Institutional Analysis: Implication for the Study of Innovations', *Review of International Political Economy* 7:4 Winter 2000: 595-644.

Inderst, G (2009) 'Pension Fund Investment in Infrastructure', *OECD Working Papers on Insurance and Private Pensions* No. 32.

Indonesia Infrastructure Guarantee Fund (2015) 'Risk Management in Toll Road', presentation at Workshop Infrastructure, Serang-Indonesia, 6 August 2015.

International Finance Corporation/IFC (2016) 'Infrastructure Finance – Colombia and FDN' *EMCompass Note* 4 April 2016.

Jumahardi (2013) 'Analysis Utilization of Pension Fund as an Alternative Financing Infrastructure', Master Thesis. Depok: University of Indonesia.

Li, J (2015) 'State Capitalism: Leviathan Economics of the Future', *Yale Economic Review*, February 13, 2015.

Mander, B (2016) 'Chile Pension Reform Comes Under World Spotlight, Private System Created when Country was a Free-market Laboratory is Paying Meagre Retirement Income. *Financial Times* 12 September 2016. Accessed 19 October 2017 https://www.ft.com/content/b9293586-7680-11e6-bf48-b372cdb1043a?mhq5j=e7

Maryaningsih, N, O Hermansyah, and M. Savitri (2014) 'The Role of Infrastructure on Economic Growth in Indonesia', *Bulletin of Monetary, Economics and Banking*, Volume 17, No. 1, July 2014.

Merdeka (2008) 'Toll Road Investment is unavailable for IRR under 12%'. *Merdeka*. Accessed 18 September 2017 <https://www.merdeka.com/uang/investasi-jalan-tol-tak-layak-jika-irr-di-bawah-12-z86rsli.html>

Mulder, A (2004) 'Government Dilemmas in the Private Provision of Public Goods', *PhD Series Research in Management 45.* Rotterdam: Erasmus Research Institute of Management (ERIM).

Naimah, Syafaatun (2009) 'Study of Public Private Partnership (PPP) Scheme to Indonesia Toll Road (Case Study: Solo – Kertosono Toll Road)', Master Thesis. Bandung: Institute Technology of Bandung.

Nawatmi, S (2013) 'Corruption and Economic Growth in 33 Province: an Empirical Study in Indonesia'. *Dinamika Akuntansi, Keuangan dan Perbankan*, Vol.2 No. 1 May 2013, pp. 66-81.

OECD (2013) 'Issues Paper on Corruption and Economic Growth'. Publish: 2 September 2013. Accessed 10 October 2017 <https://www.oecd.org/g20/topics/anti-corruption/Issue-Paper-Corruption-and-Economic-Growth.pdf>

Pannekoek, A (1936) 'State Capitalism and Dictatorship', *International Council Correspondence*, Vol. III, No. 1, January 1937. Accessed 18 May 2017 <https://www.marxists.org/archive/pannekoe/1936/dictatorship.htm>

Parikesit, D (2011) 'Introduction' in *Indonesia Construction Book 2011: Sustainable Construction Projects, Investment Innovation and the Support of Indonesia's Construction Sector*, pp.12-29. Jakarta: Ministry of Public Works.

Patidar, M (2017) 'PPT-Indian Financial System'. Accessed 15 September 2017. <http://www.enotesmba.com/2014/03/ppt-indian-financial-system.html>

Peng, M.W, G.D Bruton, C.V Stan, Y. Huang (2016) 'Theories of the (State-Owned) Firm', *Asia Pac J Manag* DOI 10.1007/s10490-016-9462-3.

PwC (2017) 'Capital Projects and Infrastructure, Risk Management is Critical to the Success of Infrastructure Projects'. Accessed 14 June 2017 <https://www.pwc.com/gx/en/industries/capital-projects-infrastructure/managing-risk.html>

PwC Luxembourg (2016) 'Global Pension Funds Best Practices in The Pension Funds Investment Process'. Accessed 6 May 2017 <http://www.pwc.lu/en/asset-management/docs/pwc-awm-global-pension-funds.pdf>

Rao, V (1980) 'Infrastructure and Economic Development', *Commerce Annual Number* 1980. Accessed 14 June 2017. <http://203.200.22.249:8080/jspui/bitstream/123456789/7873/1/Infrastructure_and_Economic_Development.pdf>

Sari, E.N (2015) 'Pembangunan Infrastruktur Berpotensi Munculkan Korupsi/Infrastructure Development Potentially Arises Corruption', 21 October 2015. Accessed 19 October 2017 <https://www.komnasham.go.id/index.php/news/2015/10/21/220/pembangunan-infrastruktur-berpotensi-munculkan-korupsi.html>

Setiadi, B (2015) 'Spotlight 22 June 2015'. Accessed 17 September 2017. < http://asiaresearch.daiwacm.com/eg/cgi-bin/files/20150622id_WaskitaKarya.pdf>

Shafik, N and B Frydman (1998) 'Foreword' on Concessions for Infrastructure: a Guide to Their Design and Award, *the World Bank Technical Paper No. 399 Finance, Private Sector, and Infrastructure Network*. New York: the World Bank.

Sinaga, R (2016) 'Estimate SOE's role in Infrastructure Development'. *Antara Sulteng*. Accessed 18 September 2017 <http://www.antarasulteng.com/berita/29173/mengukur-peran-bumn-dalam-pembangunan-infrastruktur>

Sunarsip (2011) 'Infrastructure, Rent-Seeking, and SOE'. Accessed 16 September 2017 <http://sunarsip.com/index.php?option=com_content&view=article&id=127:infrastruktur-perburuan-rente-dan-bumn&catid=37:bumn&Itemid=129 >

Syarizka, D (2016) 'GAPENSI: SOE is still dominant in Infrastructure Projects'. Accessed 16 September 2017 <http://industri.bisnis.com/read/20160407/45/535745/gapensi-bumn-masih-dominasi-proyek-infrastruktur>

TASPEN (2015) 'Continuous Improvement through Innovations, PT. TASPEN Annual Report 2015'. Jakarta: PT. TASPEN.

Thierie, W and L.D Moor (2016) 'The Characteristics of Infrastructure as an Investment Class', *Financ Mark Portf Manag* (2016) 30:277–297.

Torrisi, G (2009) 'Public Infrastructure: Definition, Classification and Measurement Issues', *Munich Personal RePEc Paper* No. 12990'.

Tuesta, D (2012) 'Pension Fund as an Investor in Infrastructure Projects in Latin America', paper presented at PPP Days 2012: Geneva: 21 February 2012.

Virlics, A (2013) 'Investment Decision Making and Risk', *Procedia Economics and Finance* 6 (2013) 169-177.

Wang, S.Q , M.F Dulaimi, MY Aguria (2004) 'Risk Management framework for Construction Projects in Developing Countries', *Construction Management and Economics*, 22:3, 237-252. Accessed 14 June 2017. <http://www.tandfonline.com/doi/pdf/10.1080/0144619032000124689?needAccess=true>

Wijana, I.W (2007) 'Indonesia's Pension Funds' Presentation, November 2007. Accessed 1 September 2017.<http://www.oecd.org/finance/private-pensions/39578561.pdf>

World Bank (2011) 'Curbing Fraud, Corruption, and Collusion in the Roads Sector'. Washington DC: the World Bank.

www.bappenas.go.id

www.bpjt.pu.go.id

www.bps.go.id

www.kemenkeu.go.id

www.kppip.go.id

www.ojk.go.id

www.theglobaleconomy.com

www.transparency.org

www.weforum.org

www.worldbank.org