EXPLORING ALTERNATIVE DEVELOPMENT FINANCING SCHEMES AND INSTRUMENTS

Background Study for the 2025–2045 Long-Term National Development Plan (RPJPN)

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EXECUTIVE SUMMARY

Development financing to achieve the vision of "Golden Indonesia 2045" must extend beyond conventional sources such as the state budget (APBN) and regional budget (APBD). As global and domestic financial markets continue to develop and technological innovation in the financial sector accelerates, varied alternative financing schemes and instruments (AFSI) can be used for national development to complement existing conventional financing instruments.

This study was developed to map various AFSI for funding the 2025–2045 National Long-Term Development Plan (RPJPN) and establish indicators to measure the role and impact of these schemes and/or instruments in financing the 2025–2045 RPJPN. This study defines "alternative financing" as non-conventional financing where most or all of the funds come from non-state budget and non-regional budget sources and have rarely or never been used for development financing to date. There are several categories of AFSI in this study: (i) public-private partnership (PPP); (ii) thematic alternative financing instruments (IPAT); (iii) a social and/or religious philanthropy fund (DFSK) scheme; (iv) regional debt financing instruments (IPUD); (v) a state and/or regional government asset utilization (UAND) scheme; (vi) community-based crowdfunding (UDSM) scheme; and (vii) other alternative financing schemes and instruments (SIPAL).

This study concludes that Indonesia is quite ready to implement various AFSI for funding the 2025–2045 RPJPN. However, the government and other stakeholders must address many issues so that Indonesia can optimally use AFSI in the 2025–2045 RPJPN, especially in terms of legal regulations, institutions, and human resources.

This study recommends the following six points to the government and other stakeholders regarding the use of AFSI for the 2025–2045 RPJPN:

First, legal regulations need to be created to form the legal basis that integrates regulations for all categories of AFSI to facilitate planning, implementation, supervision, and evaluation of the use of these schemes and instruments in financing national development.

Second, government institutions and business entities that implement and/or are related to implementing AFSI must always update their infrastructure and operational procedures because AFSI will continue to develop rapidly.

Third, it is important to prepare human resources to carry out various functions related to implementing AFSI in the 2025–2045 RPJPN, particularly schemes and financing instruments related to digitalization and/or themes related to Sustainable Development Goals (SDGs) and environmental, social, and governance principles.

Fourth, indicators need to be established to measure the role, impact, and performance of AFSI so that their implementation can be evaluated objectively and improvements can be made to address deficiencies.

Fifth, the government needs to start compiling a database that integrates all data relating to the use of AFSI in development funding. A complete database will facilitate efficient planning, utilization, monitoring, evaluation, and improvement on the use of AFSI in the 2025–2045 RPJPN.

Sixth, providing incentives can accelerate the use of AFSI. These incentives can be given to various ministries, state institutions, regional governments, and business entities involved in financing national development through AFSI.

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LIST OF ABBREVIATIONS

AATIF	Africa Agriculture and Trade Investment Fund
ADB	Asian Development Bank
AFSI	Alternative Financing Schemes and Instruments
ALUDI	Indonesian Crowdfunding Services Association
APBD	Regional Budget
APBN	State Budget
ASBANDA	Association of Regional Development Banks
ASEAN	Association of Southeast Asian Countries
Bappenas	National Development Planning Agency/Ministry of National Development Planning
BAZNAS	National Zakat Management Agency
BEAM	Blue Ecosystem Adaptation Mechanism
BEI	Indonesian Stock Exchange
BMN	State Property
BMZ	German Federal Ministry for Economic Cooperation and Development
BOO	Build-Own-Operate
BOT	Build-Operate-Transfer
BPD	Regional Development Bank
BPJT	Toll Road Regulatory Agency
BPK	Financial Audit Agency
BPKP	Government Financial Audit Agency
BPS	Statistics Indonesia
BTO	Build-Transfer-Operate
BTS	Base Transceiver Station
BUJT	Toll road operator
BUMD	Regional-Owned Enterprise
BUMN	State-Owned Enterprise
BWI	Indonesian Waqf Agency
CAF	Charities Aid Foundation
CI	Conservation International
CRI	Celebes Railway Indonesia
CSR	Corporate Social Responsibility
DBFOT	Design-Build-Finance-Operate-Transfer
DCA	Development Credit Authority
DFAT	Australian Department of Foreign Affairs and Trade
DFSK	Social and/or Religious Philanthropy Fund Scheme
DPR	House of Representatives
DPRD	Regional People's Representative Council
EBA	Asset-Backed Securities
EBRD	European Bank for Reconstruction and Development
EGSA	USAID Economic Growth Support Activity

EPC	Engineering Procurement Construction
ESG	Environmental, Social, and Governance
ETS	Emissions Trading System
EU	European Union
FGD	Focus Group Discussion
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Grant Environment Facility
GHG	Greenhouse Gas
ICRAF	World Agroforestry Center
IDXCarbon	Indonesian Carbon Exchange
IFC	International Finance Corporation
IIX	Impact Investment Exchange
IKN	Nusantara Capital City
INA	Indonesia Investment Authority
IPAT	Thematic Alternative Financing Instrument
IPO	Initial Public Offering
IPUD	Regional Debt Financing Instrument
IRR	Internal Rate of Return
JAWEF	Japan ASEAN Women Empowerment Fund
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
KfW	German Development Bank
KIK	Collective Investment Contract
KPBU	Public Private Partnership
KSEI	Kustodian Sentral Efek Indonesia
LKPP	Goods/Services Procurement Policy Agency
LPI	Investment Management Agency
MEMR	Ministry of Energy and Mineral Resources
MSME	Micro, Small, and Medium Enterprise
MUI	Indonesian Ulema Council
NDP	National Development Planning
NEK	Carbon Economic Value
NPV	Net Present Value
O&M	Operation and Maintenance
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
OeEB	Austrian Development Bank
OJK	Financial Services Authority
PAD	Local Own-Source Revenue
PDAM	Regional Water Utility Company
PEFINDO	PT Pemeringkat Efek Indonesia
Permen	Minister Regulation
Perppu	Government Regulation in lieu of Law

Perpres	Presidential Regulation
PII	PT Penjaminan Infrastruktur Indonesia
PLTMH	Micro Hydropower Plant
PLTP	Sarulla Geothermal Power Plant
PMK	Minister of Finance Regulation
PMN	State-Owned Investment
PNRE	Pertamina New and Renewable Energy
POJK	Financial Services Authority Regulation
PP	Government Regulation
PPF	Project Preparation Facility
PPP	Public-Private Partnership
PSP	Private Sector Participation
PT	Limited Liability Company
PUPR	Ministry of Public Works and Public Housing
PWRF	Philippine Water Revolving Fund
RLU	Royal Lestari Utama
ROE	Regional-Owned Enterprises
RPJMN	National Medium-Term Development Plan
RPJPN	National Long-Term Development Plan
SBN	Government Securities
SBSN	Sharia Government Securities
SDG	Sustainable Development Goal
SIPAL	Other Alternative Financing Schemes and Instruments
SMF	PT Sarana Multigriya Finansial
SMI	PT Multi Infrastructure Facility
SOE	State-Owned Enterprises
SP	Letters of Participation
SPAM	Drinking Water Supply System
SRN PPI	National Climate Change Control Registry System
SUN	Government Bond
SWF	Sovereign Wealth Fund
TLFF	Tropical Landscapes Finance Facility
TMG	Tokyo Metropolitan Government
TVA	Tennessee Valley Authority
UAND	Utilization Scheme for State-Owned and/or Regional-Owned Assets
UDSM	Community-Based Crowdfunding Scheme
UGM	Gadjah Mada University
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
UU	Law
UUD	Constitution

WLB	Women’s Livelihood Bond
WMP	World Mosquito Program
WVI	Wahana Visi Indonesia

1. BACKGROUND

The Preamble to the 1945 Constitution states the hopes of the Indonesian nation: to create an independent, united, sovereign, just, and prosperous state. To achieve these ideals, President Joko Widodo conveyed his idea of the "2015–2085 Indonesian Dream." The Indonesian Dream includes seven targets to be achieved: (i) Indonesian human resources whose intelligence surpasses that of other nations; (ii) an Indonesian society that upholds pluralism, is noble in culture, is religious, and upholds ethical values; (iii) Indonesia as the center of global education, technology, and civilization; (iv) society and government officials free from corrupt behavior; (v) equitable distribution of infrastructure development throughout Indonesia; (vi) Indonesia being independent and the most influential country in the Asia Pacific region; and (vii) Indonesia as a barometer of world economic growth.

To achieve this dream, the government has prepared the 2023–2045 National Long-Term Development Plan (RPJPN), which has the theme of "Golden Indonesia 2045" (Indonesia Emas 2045), with a vision to establish Indonesia as a sovereign, advanced, and sustainable country, marking a century of Indonesia's independence. The "Golden Indonesia 2045" vision encompasses five key targets: (i) increasing Indonesia's per capita income to equal that of developed countries; (ii) reducing poverty to zero percent and reducing inequality; (iii) increasing Indonesia's leadership and influence in the international forum; (iv) increasing Indonesia's competitiveness and human resources; and (v) reducing greenhouse gas (GHG) emissions toward net zero emissions. This realization of this vision involves 17 development goals, eight development agendas, and 45 primary development indicators.

The government has set 17 development goals to be achieved to realize "Golden Indonesia 2045." The 17 development goals include three main transformations: social, economic, and governance. These three transformations are supported by two transformation foundations: (i) the foundation of supremacy of law, stability, and Indonesian leadership; and (ii) the foundation of social and cultural resilience. The Transformation Implementation Framework seeks to realize equitable and just regional development, the availability of quality and environmentally friendly facilities and infrastructure, and the continuity of development. The relationship between the "Golden Indonesia 2045" vision, five goals of Indonesia 2045, eight development agendas, and 17 development goals is shown in Figure 1.1.

The government has eight development agendas to achieve the "Indonesian Vision 2045": (i) social transformation to create a prosperous, adaptive, and competitive society; (ii) economic transformation to create "Advanced Indonesia"; (iii) sustainable infrastructure development to support a just economy and the fulfillment of basic needs; (iv) equitable development to reduce regional disparities and gaps between communities, age groups, genders, and persons with special needs; (v) transformation of governance to create conducive and efficient regulations and bureaucracy; (vi) stability in economy, politics, law, security, and defense; (vii) development financing that is conducive and innovative and involves the participation of all development stakeholders; and (viii) national resilience in facing disasters, economic fluctuations, and the decline in environmental and social quality. The eight development agendas can be grouped into five working groups as follows: "Social Transformation" (Agenda 1); "Economic Transformation" (Agendas 2, 3, and 4); "Governance Transformation" (Agenda 5); "Stability and Financing" (Agendas 6 and 7); and "National Resilience" (Agenda 8).

Figure 1.1 Golden Indonesia 2045 Vision and Targets

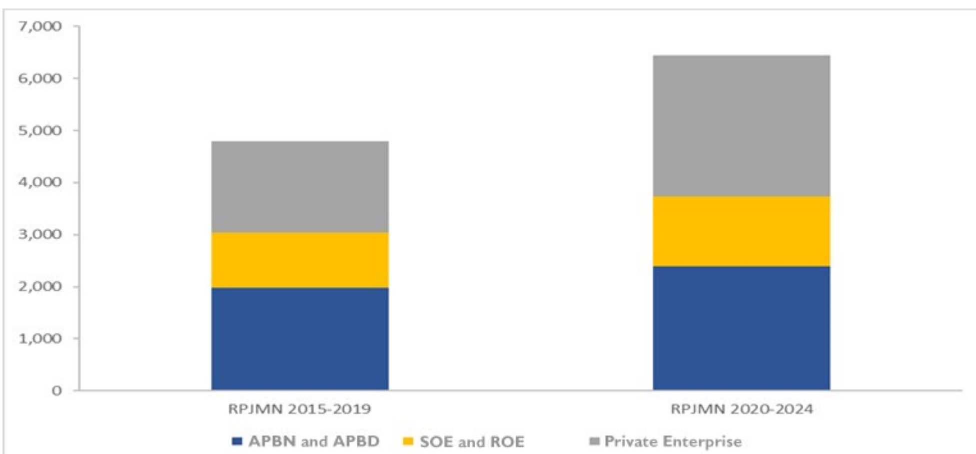
Source: Ministry of National Development Planning/National Development Planning Agency (Bappenas)

Among the eight development agendas, Agenda 7 holds a crucial role so that efforts to achieve "Golden Indonesia 2045" receive adequate support in terms of financing. Development financing to achieve "Golden Indonesia 2045" cannot simply rely on conventional financing sources from the State Revenue and Expenditure Budget (APBN) and Regional Revenue and Expenditure Budget (APBD).

National development, so far, has been mostly financed with conventional government financing instruments sourced from the state budget and regional budget, as well as from investments made by state-owned enterprises (SOE), regional-owned enterprises (ROE), and private-owned enterprises (the private sector). The amount of funds collected from conventional financing instruments can only fulfill a part of national development financing needs, especially in terms of infrastructure development. National development that exclusively relies on conventional financing sources will not be able to bring Indonesia to achieve Golden Vision 2045.

Based on a study by the Ministry of Finance, conventional financing sources are estimated to only be able to provide 41% of the infrastructure financing needs in the 2014–2019 National Medium-Term Development Plan (RPJMN) and 37% of the financing needs in the 2020–2024 RPJMN. Meanwhile, the remaining fulfillment is expected to come from non-conventional financing, namely from financing by SOEs and ROEs (22% in the 2015–2019 RPJMN and 21% in the 2020–2024 RPJMN) and privately owned enterprises (37% in the 2015–2019 RPJMN and 42% in the 2020–2024 RPJMN) (Figure 1.2).[1]

Figure 1.2 Sources of Infrastructure Financing in 2015–2019 RPJMN and 2020–2024 RPJMN



Source: Ministry of Finance

[1] https://kpbu.kemenkeu.go.id/read/1160-1476/umum/kajian-opini-publik/global-infrastructure-hub-gih-dan-penyediaan-infrastruktur

In practice, SOEs, ROEs, and private enterprises are not necessarily able to fulfill their share of infrastructure financing as expected by the government, and thus, community participation is also needed.

This study was carried out to identify and map various alternative financing schemes and instruments (AFSI) for funding the 2025–2045 RPJPN and to formulate indicators to measure the role and impact of these schemes and/or instruments for the 2025–2045 RPJPN and the national economy. This study defined AFSI as financing schemes and/or instruments in which most or all of the funds come from non-APBN and non-APBD sources and have rarely or never been used for development financing to date. Apart from AFSI, there are also non-conventional financing schemes and instruments that have often been used in national development, for example, independent private investment carried out without involving financial support and/or guarantees from the government.

The research aimed to answer two main questions: (i) What AFSI could potentially be used by the Indonesian government to meet the funding needs of the 2025–2045 RPJPN? and (ii) How can the role and impact of AFSI be measured for the 2025–2045 RPJPN and the national economy?

Employing a combination of qualitative and quantitative methods, the qualitative aspect involves mapping alternative financial schemes and instruments for financing the 2025–2045 RPJPN. The qualitative data collection techniques in this study included a literature study, focus group discussions (FGDs), and in-depth interviews with practitioners and experts in development financing from various ministries and government institutions, Bank Indonesia, the Financial Services Authority (OJK), private business entities, social and/or religious philanthropic institutions, and other stakeholders. Based on the qualitative results obtained from mapping AFSI, the quantitative method is used to design measurement indicators on the role and impact of AFSI on the 2025–2045 RPJPN and the national economy.

This study is expected to serve as valuable reference for the government, particularly the Ministry of National Development Planning [NDP]/National Development Planning Agency [Bappenas] offering insights for planning and implementing policies related to the use of AFSI in the 2025–2045 RPJPN.

2. REVIEW OF VARIOUS ALTERNATIVE FINANCING SCHEMES AND INSTRUMENTS (AFSI)

This chapter maps various AFSI and includes a general assessment of the potential and/or practice of their utilization in Indonesia. The mapping refers to various existing literature, as well as the results of in-depth interviews and three FGDs held with the Ministry of NDP/Bappenas, several other ministries and/or non-ministerial institutions, the OJK, Bank Indonesia, private business entities, social and/or religious philanthropic institutions, and various other stakeholders related to the topic of this study.

2.1. MAPPING OF VARIOUS AFSI

Based on the funding source, development financing schemes and instruments can be classified into (i) schemes or/instruments whose funds come from the government; (ii) schemes and/or instruments whose funds come from non-governmental bodies (for example, business entities, religious institutions, and philanthropic institutions); and (iii) schemes and/or instruments whose funds come from a mixture of government funds and non-government agency funds. Figure 2.1 displays a tree diagram of various development financing schemes and instruments based on funding sources.

This study uses two criteria to define AFSI: (i) financing schemes and/or instruments where most or all of the funds come from non-state budget and non-regional budget sources; and (ii) the scheme and/or instrument has rarely or never been used in development financing to date.

State budget-derived funds in this study encompasses state revenues from taxes, non-tax state revenues, grants, government loans from domestic and foreign sources, and funds from the issuance of government securities (SBNs), in both conventional government bond (SUN) and sharia government securities (SBSN) forms. Meanwhile, regional budget-derived funds include local own-source revenue (PAD), intergovernmental transfers as well as inter-regional transfers, and other legitimate regional income in accordance with existing laws and regulations.

By using these two criteria in defining AFSI, this study does not include non-thematic SBSN as an alternative financing instrument because this instrument has been issued by the government since 2008 and is often used in development financing in Indonesia. In contrast, this study classifies green sukuk issued by the government as an alternative financing instrument because it was only recently introduced by the government in 2018 (in the form of global green sukuk) and is still rarely used in development financing. Even though the government provides financial support for public-private partnership (PPP) projects, in which some of the funds come from the state or regional budget, this study classifies the PPP financing scheme as an alternative financing scheme because the larger proportion of investment funding sources generally comes from private investors. This study classifies regional loans as an alternative financing instrument because they are still rarely used by regional governments, even if these have been regulated by Law No. 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments.

This study uses the concept of “alternative financing” and not “innovative financing” as contained in Presidential Regulation (Perpres) No. 111 of 2022 concerning the Implementation of the Achievement of Sustainable Development Goals. The Perpres defines “innovative financing” as funding sources and schemes originating from non-government stakeholders, either global, national, or regional, to accelerate the achievement of the Sustainable Development Goals (SDGs).[2] There are two main differences between the concept of "innovative financing" in Presidential Decree No. 111 of 2022 and "alternative financing" in this study:

(1) The funds referred to in "innovative financing" are entirely sourced from non-government stakeholders, while funds for "alternative financing" can be sourced from the government, non-government bodies, or a mixture of government funds and non-government bodies.
(2) "Innovative financing" schemes and instruments are specifically aimed at achieving the SDGs, while "alternative financing" schemes and instruments are aimed at achieving general development goals and are not limited to just achieving the SDGs.

It can be concluded that "innovative funding" is a subset of "alternative financing" because the scope of funding sources and purposes is more limited than "alternative financing."

Based on their intended use, this study classifies various AFSI into seven main categories as follows: (i) PPP scheme; (ii) thematic alternative financing instrument; (iii) social and/or religious philanthropy fund scheme; (iv) regional debt financing instrument; (v) state and/or regional government asset utilization scheme; (vi) community-based crowdfunding scheme; and (vii) other financing schemes and instruments. In practice, there are several AFSI that can be classified into more than one of the above categories because they combine funding sources from different categories. Figure 2.2 displays a tree diagram of various AFSI based on their intended use.

The following is an explanation of each category of AFSI.

[2] Article 1 Number 12 of Perpres No. 111 of 2022 concerning Implementation of the Achievement of Sustainable Development Goals.

Figure 2.1 Various Development Funding Schemes and Instruments by Funding Sources

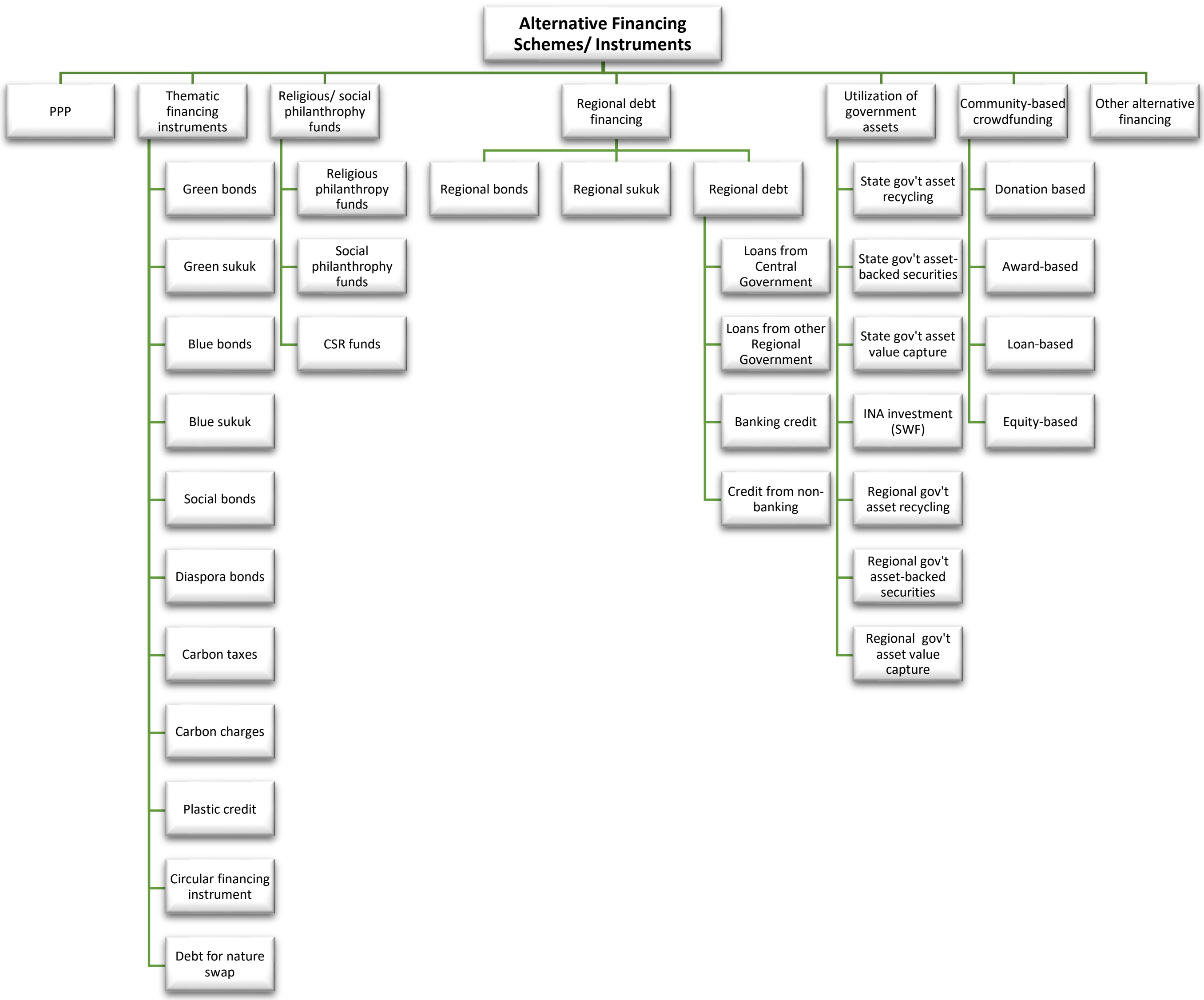
Note

Commonly used financing scheme or instrument

Alternative financing scheme or instrument

Source: Author's Analysis

Figure 2.2 Various Alternative Funding Schemes and Instruments by Intended Use



Source: Author's Analysis

2.1.1. PUBLIC-PRIVATE PARTNERSHIP (PPP) FINANCING SCHEMES

PPP is a financing scheme for development projects and/or operation of infrastructure and/or provision of public services involving the government (either central or regional) and business entities, with one or more parties contributing financing, support, and responsibility for the risks of the project. The business entity in question can be in the form of an SOE, ROE, or private business entity (company). The PPP scheme combines the resources owned by the government and business entities through the allocation of risks and responsibilities. In the practice of implementing PPP projects, the business entity offers some of the funds and expertise needed to provide infrastructure and/or public services, while the government provides support in the form of funds, land, and/or other state-owned assets.

The World Bank defines PPP as a mechanism for governments to provide and implement infrastructure and/or public services using private sector resources and expertise.[3] Meanwhile, the Organization for Economic Co-operation and Development (OECD) states that PPP is a long-term agreement between the government and a private partner in which the private partner provides and finances public services using capital as an asset and shares the associated risks (OECD, 2012). The Asian Development Bank (ADB) differentiates PPP from private sector participation (PSP). Although both PPP and PSP involve the participation of the private sector, PPP has the nature of a partnership, while PSP tends to be a transfer of responsibility for providing infrastructure and/or public services from the government to the private sector. PPP emphasizes the important role of the government in ensuring that social responsibilities are fulfilled and that structural reforms and investment in the public sector are achieved satisfactorily. In PSP, the government is not obliged to carry out this role because the responsibility for providing infrastructure and/or public services is completely handed over to the private sector (ADB, 2008).

The PPP scheme combines the resources owned by the government and a business entity through shared risks and responsibilities. The PPP scheme allows the government to obtain funds for investment financing and expertise from the private sector in infrastructure financing so that the government can focus on planning, policy formulation, and related regulations. Good governance plays a very important role in ensuring a conducive business climate and creating a strong legal framework so that private parties will be interested in investing in PPP projects.

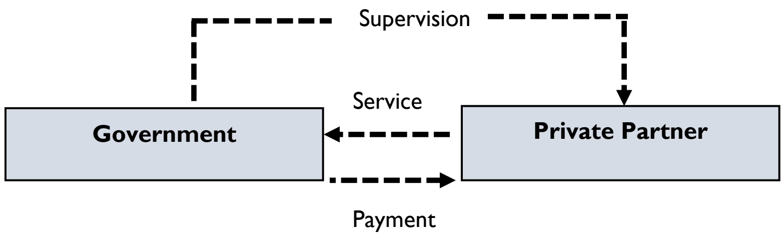
There are six basic types of PPP contracts that are widely used in Asian countries according to ADB classification (ADB, 2008):

1) **Service Contract**

   In a service contract, the government assigns a private partner to carry out one or several tasks or services for a certain period, usually for a short term (between 1 and 3 years). The government remains the main provider of infrastructure and/or services, and only part of the task is handed over to the private partner. Private partners are required to fulfill their obligations in accordance with the agreed-upon government fees and meet the public service standards set by the government.

[3] https://ppp.worldbank.org/public-private-partnership/about-us/about-public-private-partnerships

Figure 2.3 The Service Contract Schemes in PPP

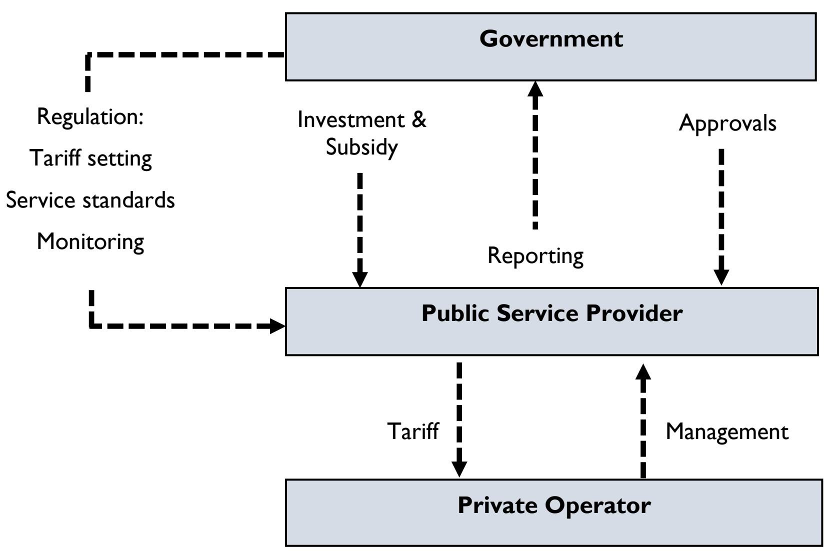


Source: Heather Skilling and Kathleen Booth in ADB (2008)

2) Management Contract

In a management contract, the government assigns some or all of the management and operational tasks of public services to a private party (for example, services in the utility sector, port services, and hospitals). The government still holds primary responsibility for providing public services, but the authority for day-to-day management of these services is handed over to private partners. The private sector is obliged to meet public service standards set by the government. In general, the private sector provides working capital for operational activities but does not invest capital for investment needs. PPP schemes based on management contracts are more commercial in nature than those based on service contracts. Private partners receive payments from the government for providing services and operational costs based on amounts agreed at the start of the contract but also receive performance incentives or a share of operational profits if they meet certain targets.

Figure 2.4 The Management Contract Scheme in PPP



Source: Heather Skilling and Kathleen Booth in ADB (2008)

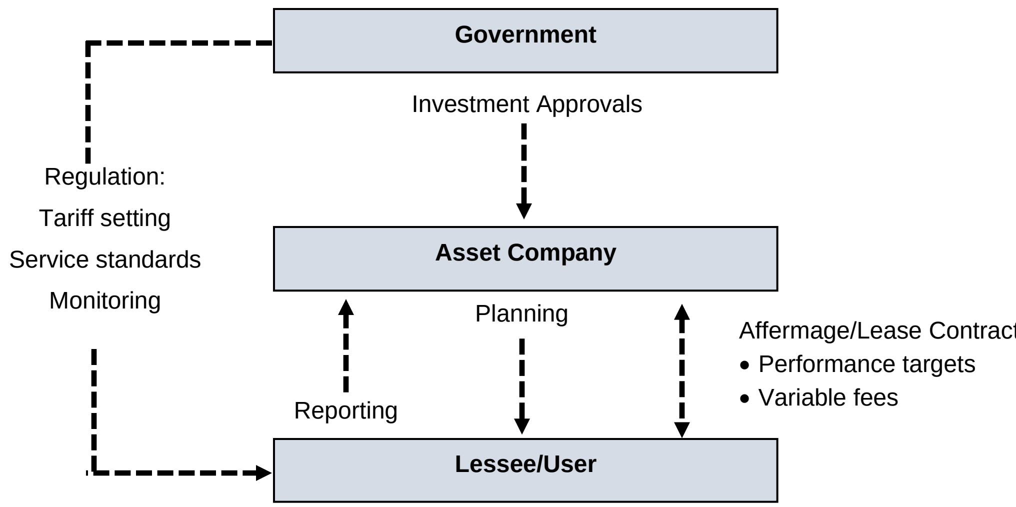
3) Lease Contract and Affermage Contract

In a lease contract and affermage contract, private partners are fully responsible for providing public services and fulfilling obligations related to the quality and standards of public services set by the government. The government is responsible for new investments or investments to replace existing public goods, but private partners are responsible for providing public services at all costs and risks.

The government does not sell state-owned infrastructure or assets to private parties; private parties act as tenants. Lease or affermage contracts are usually long-term (for example, 10–20 years).

In a lease or affermage contract, the private partner receives payments from users of public services and then uses a portion of the receipts to make payments to the government. The main difference between a lease contract and a usage contract is the reference to the amount of payment that must be made by the private partner to the government. In a lease contract, the private partner is obliged to pay the lease specified in the contract without reference to the amount of operational revenue. In an affermage contract, the government receives payments from private partners based on the amount of operational revenues.

Figure 2.5 The Lease and Usage Contract Schemes in PPP



Source: Heather Skilling and Kathleen Booth in ADB (2008)

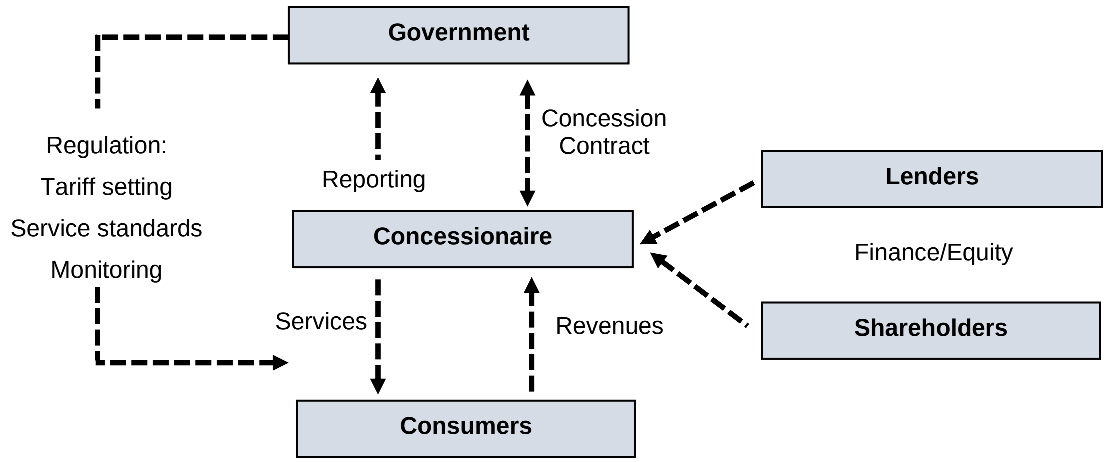
4) Concession Contract

In a concession contract, the private partner holding the concession is fully responsible for providing infrastructure and/or public services in a certain area, including (i) providing capital for investment in asset procurement and working capital for operational activities; (ii) operation, management, maintenance, and repair of public infrastructure and/or services; and (iii) collection of revenues from public use of infrastructure. In practice, the government can provide investment funding support to concession holders. Although the concession holder is responsible for procuring the assets, the assets become public property during the concession period and after the concession period ends.

Concession holders collect fees directly from users of infrastructure and/or public services. The amount of fees and requirements for changes are usually determined by the government in the concession contract. The concession holder pays a certain amount of funds to the government or a certain share of operational revenues to the government, depending on the clauses in the concession contract. The government is responsible for setting public service standards and ensuring that concession holders meet the set standards.

Concession contracts have a long-term nature (usually 25–30 years) to provide the concession holder with the opportunity to break even and obtain a decent profit from the investment made.

Figure 2.6 The Concession Contract Scheme in PPP



Source: Heather Skilling and Kathleen Booth in ADB (2008)

5) Build-Operate-Transfer and Similar Contracts

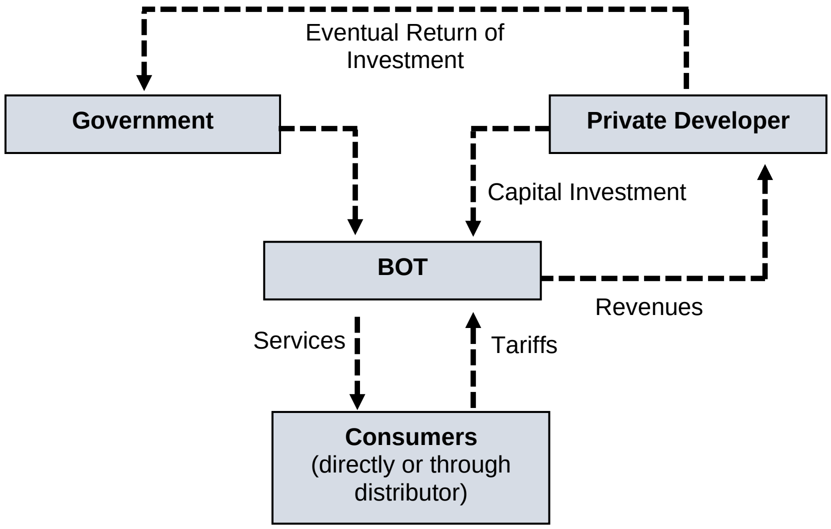
In a build-operate-transfer (BOT) contract, the private partner provides investment capital, builds the infrastructure, and operates the infrastructure during the contract period. The private partner is responsible for providing capital for infrastructure development, but the government can help by providing funding support and/or purchasing (subsidizing) part of the output produced by the infrastructure being built. The government sets public service standards that must be met by private partners.

Despite some similarities, there are two main differences between BOT and concession contracts. First, a concession contract is generally an expansion of an existing infrastructure and/or public service system, while a BOT contract is one for the construction of new infrastructure and/or systems. Second, assets held by the private partner in a concession contract become public property during the concession period, and thereafter, while in a BOT contract, assets held by the private partner belong to the private partner during the contract period and will become public property after the end of the contract period (ADB, 2008).

Other infrastructure construction contracts are similar to BOT but differ in terms of ownership of the infrastructure being built, for example, design-build-finance-operate-transfer contracts (DBFOT), build-transfer-operate contracts (BTO), and build-own-operate contract (BOO). In DBFOT contracts, the private partner is responsible for designing, building, financing, and operating the infrastructure during the contract period and then handing over the infrastructure to the government after the contract period ends. In a BTO contract, the private partner provides investment capital and builds the infrastructure, then hands over the completed infrastructure to the government to be managed by the government or a party appointed by the government. In a BOO contract, the private partner provides investment capital, builds, and owns the infrastructure (without any transfer to the government) and operates the infrastructure.

Depending on the clauses in the BOT contract and similar infrastructure construction contracts, the private partner may be required to make a certain amount of payments to the government during the contract period or a certain share of the operating income of the infrastructure built.

Figure 2.7 Build-Operate-Transfer Contract Scheme in PPP

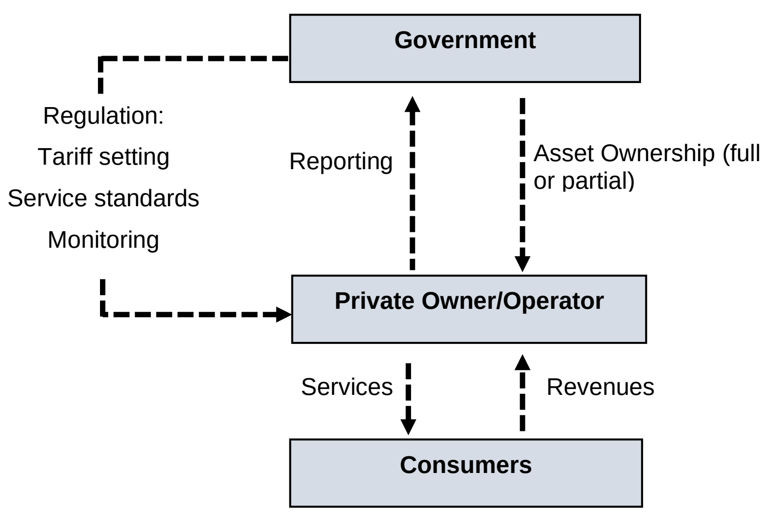


Source: Heather Skilling and Kathleen Booth in ADB (2008)

6) Joint Venture Contract

In a joint venture contract, the government and private partners jointly build, own, and operate the infrastructure. Both the government and the private sector receive a share of the company's operational and non-operational income and jointly bear the risks faced by the company. The government and private partners can establish a new joint venture or jointly own shares of an existing company. In some countries, joint venture companies can offer their shares to the public through stock exchanges.

Figure 2.8 Joint Venture Contract Scheme in PPP



Source: Heather Skilling and Kathleen Booth in ADB (2008)

Good corporate governance in a joint venture contract is essential because, in many cases where it is implemented, the government acts as a shareholder of the company and a regulator in the industry. Joint ventures must remain independent and focused on business interests and must not be interfered with or harmed by political interests. The composition of the joint venture's board of directors reflects the composition of shareholders from the government and private partners. Professional businesspeople who usually come from private partners carry out joint company operational activities.

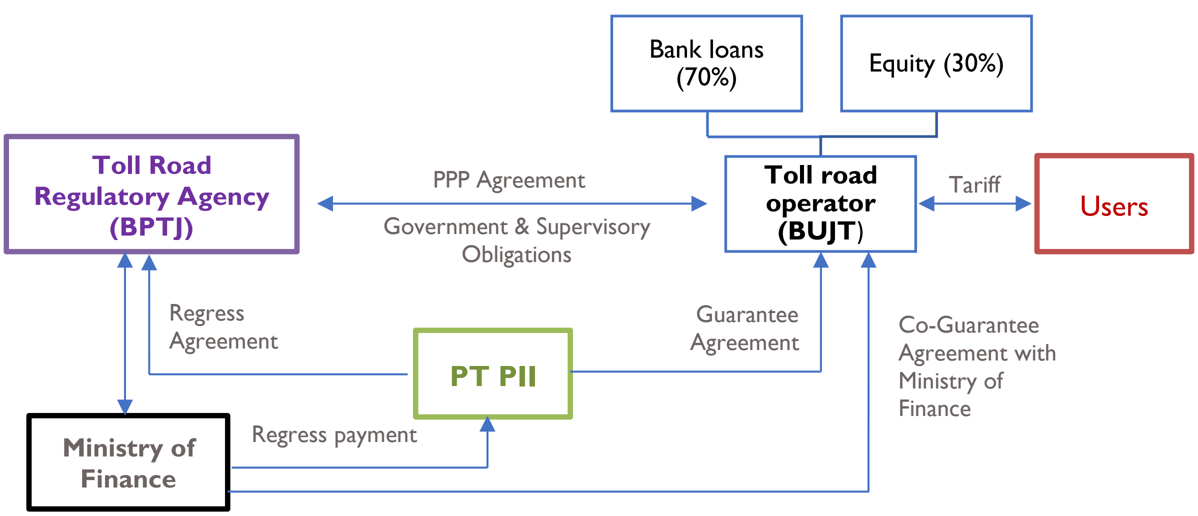
Indonesian law uses the term *kerja sama pemerintah dan badan usaha* (KPBU) to refer to PPP for the provision of infrastructure for the general (public) interest. Article 1 Number 6 of Perpres No. 38 of 2015 states that KPBU is defined as a partnership between the government and a business entity in providing infrastructure for the public interest by referring to specifications previously determined by a minister/head of agency/region/SOE/ROE, which partially or entirely uses the resources of the business entity by paying attention to the distribution of risks between the parties.

The following are several examples of infrastructure financing projects in Indonesia using the PPP scheme.

Example 2.1 Construction of the Batang-Semarang Toll Road Section

The Batang-Semarang toll road section (75 km) is part of the Trans-Java Toll Road that connects Jakarta and Surabaya. This toll road section has been in operation since December 2018. PT Jasa Marga Tbk. and PT Waskita Toll Road (both of which are SOEs operating as toll road operators or BUJT) act as investors, while the construction was carried out by PT Bangun Tjipta Sarana (a private toll road business entity and not an SOE). PT Jasa Marga operates this toll road section. The construction of this toll road section was carried out using the DBFOT scheme. The project investment cost reached USD 864 million with an internal rate of return (IRR) of 13.7% and a net present value (NPV) of USD 230 million. The government plays a role in land acquisition, determining toll rates, and underwriting investment risks (through PT Penjaminan Infrastruktur Indonesia [PT PII]).

Figure 2.9 PPP Scheme in the Construction of the Batang-Semarang Toll Road Section

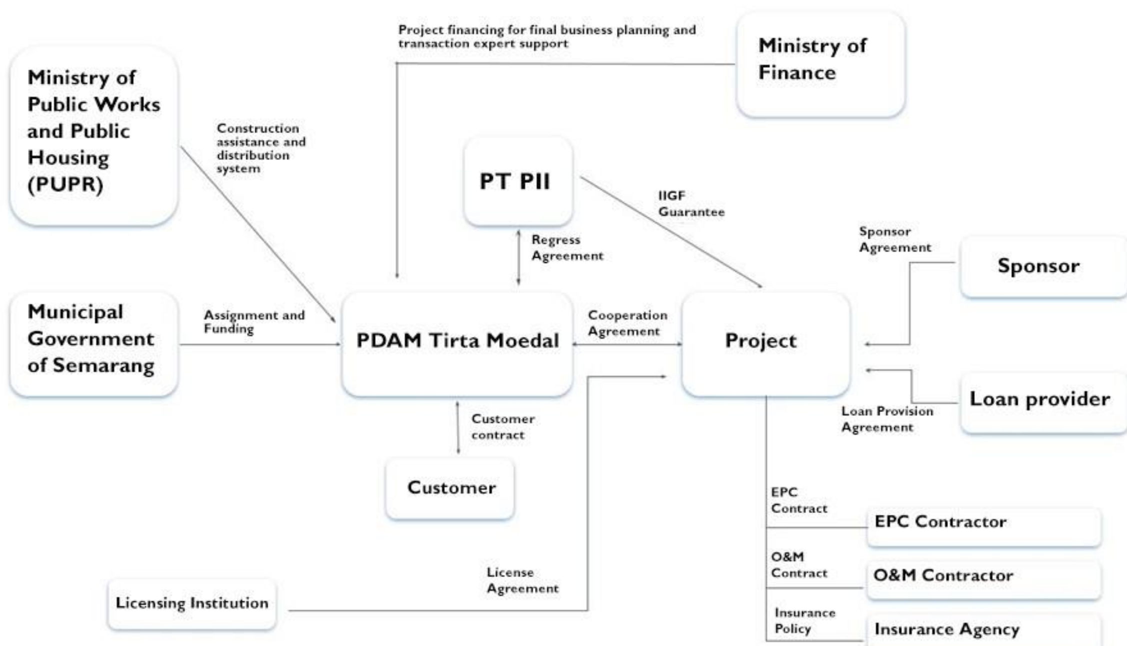


Source: Bappenas (2023)

Example 2.2 Construction of a Drinking Water Supply System in Semarang

The West Semarang drinking water supply system (SPAM) was built with a product capacity of 1,000 liters/second. The Semarang SPAM services are divided into three sub-districts and five service zones. PT PDAM Tirta Moedal Semarang (an ROE) acts as the investor from the government side, while the investment by the private sector is carried out by a consortium consisting of PT Air Semarang Barat, PT Aetra Air Jakarta, and PT Medco Gas Indonesia. This SPAM development project uses a BOT scheme with financing from BCA Bank. The West Semarang SPAM began operating in 2021. The cost of this development project reached USD 29.47 million, with an IRR of 9.07% and an NPV of USD 16 million.

Figure 2.10 PPP Scheme in the Construction of a Drinking Water Supply System in Semarang



Source: Ministry of Finance

Example 2.3 Construction of the Makassar-Parepare Railway

The 142 km-long Makassar-Parepare railway line was built using a BOT scheme and carried out by PT Celebes Railway Indonesia (CRI). President Joko Widodo inaugurated this railway line in March 2023. PT CRI is a joint venture company specifically established in 2019 to work on railway line construction projects. The ownership composition of PT CRI is as follows: (i) PT Pembangunan Perumahan Tbk. (SOE) with ownership of 47.8% of the company's total shares; (ii) PT Bumi Karsa (non-SOE domestic private company) amounting to 25.3%; (iii) PT China Communications Construction Engineering Indonesia (foreign private company) at 22.5%; and (iv) PT Iroda Mitra (non-SOE domestic private company) at 4.4%.

Source: Kontan, March 30, 2003

Example 2.4 Development of the Jatiluhur I Drinking Water Supply System

PT Wika Tirta Jaya Jatiluhur is a joint venture company working on the Jatiluhur I drinking water supply system (SPAM) construction project. Jatiluhur I is designed to cater to the drinking water requirements of Jakarta residents and aims to mitigate land subsidence in DKI Jakarta caused by excessive groundwater extraction. Commencing in 2021 under the Build-Operate-Transfer (BOT) scheme, the Jatiluhur SPAM construction project is targeted for completion in 2023. The ownership composition of PT Wika Tirta Jatiluhur is as follows: (i) PT Wijaya Karya (SOE) with 80% ownership of the company's total shares; (ii) PT Jaya Construction Manggala Pratama Tbk. (non-SOE domestic private company) with 17.44%; (iii) and PT. Tirta Gemah Ripah with 2.56% (ROE owned by the Regional Government of West Java Province).

Source: PT Wika Tirta Jaya Jatiluhur

One of the financing structures currently emerging in PPP financing schemes is blended finance. Blended finance is not a financing scheme per se but refers to the use of catalytic funds from the public or philanthropic sources to increase private sector investment in developing countries to achieve the SDGs (Convergence, 2022). The OECD defines blended finance as the strategic use of public or philanthropic funds for development to raise additional commercial external financing funds from the private sector for investments related to the SDGs in developing countries (OECD, 2018). The International Finance Corporation (IFC) defines blended finance as using relatively small amounts of concessional funding from donors to mitigate specific investment risks and help balance the risk-reward profile for startup investments that would not be feasible based solely on commercial considerations (IFC, 2020).

Purwanto and Alfian (2022) summarized various definitions of blended finance and concluded that blended finance is a transaction structure that seeks to optimize the use of development financing instruments (public/philanthropic) to mobilize commercial financing (public/private). There are three main keywords in blended finance: (i) development finance; (ii) additional financing (additional finance); and (iii) sustainable development (sustainable finance).

Based on the various definitions above, this study defines blended finance as an investment financing structure in a PPP financing scheme that uses catalytic funds and/or guarantees against risks to attract private investors to invest in development projects and/or the provision of public services that are less profitable from a commercial perspective, or where the rate of return is relatively low, but has a positive impact on efforts to achieve SDGs.

Convergence (2022) classifies various types of blended finance structures into the following four categories:

Structure 1: The government and/or philanthropic investors provide **catalytic funds** in the capital structure for project investment with more lenient terms than those in the financial markets. This is done to lower the cost of capital in the project as a whole or to provide additional protection for private investors.

Structure 2: The government and/or philanthropic investors provide support for project financing by providing **guarantees or insurance** with more lenient terms than those in the financial market.

Structure 3: The government and/or philanthropic investors provide **grants to fund technical assistance** that can be used before or after investment to strengthen the business commercial aspects of the project and its impact on development.

Structure 4: The government and/or philanthropic investors provide **grants to finance project planning and preparation**.

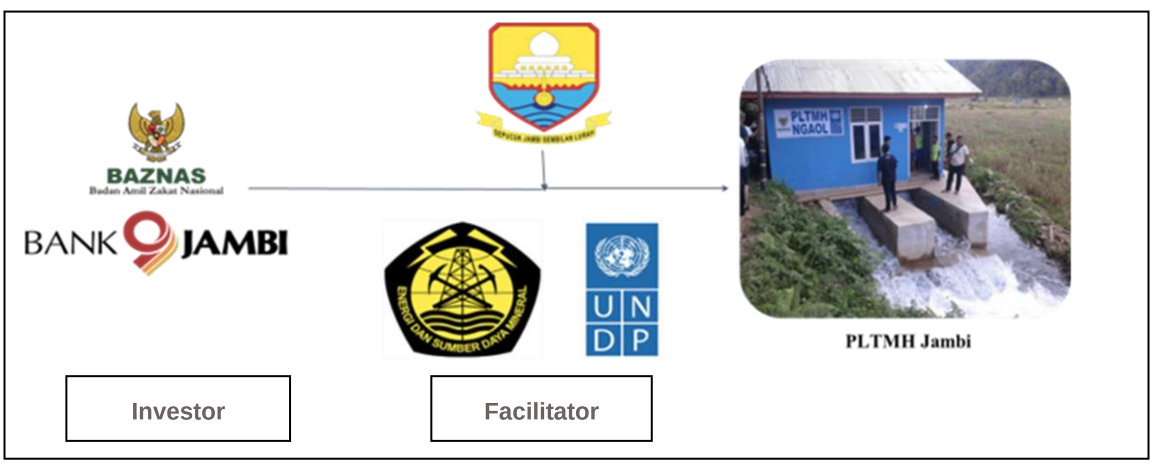
The blended finance structure is starting to be widely used by many countries, in line with the increasing need for development financing and the deepening of financial markets. In 2020, the energy sector was the sector that received the most funding using the blended finance structure (35% of the total number of projects financed under this scheme in 2020), followed by the agricultural sector (28%), and the financial industry sector (26%) (Convergence, 2022).

The following are several examples of PPP projects for infrastructure development in Indonesia and other countries that are funded using a blended finance structure.

Example 2.5 Micro Hydropower Plant in Jambi Province

Zakat funds are used as one of the blended finance sources for the Micro Hydropower Plant (PLTMH) development project in four villages in Jambi Province. Financing for this program applies a blended finance model between the National Zakat Management Agency (BAZNAS) amounting to IDR 4.8 billion (USD 307,082) and Bank Jambi's corporate social responsibility (CSR) of IDR 3.76 billion (USD 240,548). The Jambi Provincial Government provided land, the United Nations Development Program (UNDP) distributed catalytic funds from the grant environment facility (GEF), and the Ministry of Energy and Mineral Resources (MEMR) provided guarantees for this project. These power plants provide electricity access to 803 households in four villages.

Figure 2.11 PPP Schemes with Blended Finance Structure for PLTMH in Jambi Province



Source: MEMR, UNDP

Example 2.6 Sarulla Geothermal Power Plant (PLTP)

Sarulla Geothermal Power Plant (PLTP) in North Sumatra is one of the largest geothermal power plants in the world, with a production capacity of 330 megawatts. The construction of this power plant was financed using a blended finance structure consisting of a concession and commercial loan. This construction project received a guarantee against risks from the Japan Bank for International Cooperation (JBIC) and a 20-year business feasibility guarantee letter from the Indonesian government. This project provides a share of the proceeds to investors for 30 years with an expected return on equity of 14–16%. The guarantees from JBIC and the Indonesian government, as well as revenue incentives, were used to attract private creditors to finance the power plant construction.

In 2014, the Sarulla construction project succeeded in meeting the total financing needs of USD 1.6 billion, including direct loans from JBIC amounting to USD 492 million, loans from commercial banks with collateral from JBIC amounting to USD 329 million, loans from ADB amounting to USD 250 million, and two senior debt tranches from ADB funded by the Clean Technology Fund (USD 80 million) and the Canadian Climate Fund for Private Sector in Asia (USD 20 million). The three power plant units began operating in March 2017, October 2017, and May 2018, respectively. Management of the Sarulla power plant is carried out by PT Pertamina Geothermal Energy Tbk., a subsidiary of Pertamina (an SOE). The electricity produced by the Sarulla power plant is sold to PT Perusahaan Listrik Negara (an SOE) based on a long-term sales contract.

Source: Climate Policy Initiative, UNESCAP, ADB, and UNDP

Example 2.7 Blue Halo S Program

The Indonesian government, with the support of the Green Climate Fund (GCF), Conservation International (CI), and Konservasi Indonesia, launched the “Blue Halo S” program in November 2022. This program used an integrated and comprehensive approach to manage conservation of marine and fishery resources and encompassed the ecological and economic loop between marine production and protection.

The Blue Halo S program would be financed with a blended finance structure, utilizing government and philanthropic funds to attract private investment in marine conservation and sustainable development efforts. The program aimed to raise funds of up to USD 300 million from GCF and other sources through a blended finance scheme, which consists of grant facilities for the blue ecosystem adaptation mechanism (BEAM) and blue bonds, to be developed together with the Indonesian government. The Coordinating Ministry for Maritime Affairs and Investment would coordinate various implementation activities of the program. GCF and CI have stated their commitment to providing a project preparation facility (PPF), worth USD 1.5 million and USD 350,000, respectively, for the Blue Halo S program in Indonesia.

Source: Coordinating Ministry for Maritime Affairs and Investment

Example 2.8 Japan Association for Southeast Asian Nations (ASEAN) Women Empowerment Fund (JAWEF)

JAWEF uses a blended finance structure initiated by BlueOrchard (a Japan-based financial management institution) and is intended specifically to provide micro-financing for female entrepreneurs in ASEAN countries.

The share ownership structure in JAWEF is divided into three tranches: (i) the first tranche consisting of first-loss shares and a small portion of Junior shares amounting to USD 1 million; (ii) the second tranche consisting of the majority of Junior shares and Mezzanine shares (amounting to USD 120 million); and (iii) the third tranche in the form of Class A shares amounting to USD 120 million. If an investment loss occurs, the first tranche shareholder investor is the party who must initially bear the loss.

When JAWEF was first launched in 2016, BlueOrchard and Summit Financial provided catalytic funding of USD 500,000 to cover credit and exchange rate risks on the first tranche of JAWEF's investment capital structure, while the JBIC and the Japan International Cooperation Agency (JICA) each provided USD 30 million of catalytic funds for the second tranche.

By the end of 2019, JAWEF has reached more than 250,000 micro-entrepreneurs. As many as 91% of entrepreneurs who receive funding from JAWEF are female entrepreneurs. JAWEF has also succeeded in mobilizing funds from investors with a vision to improve gender equality.

Source: Convergence

Example 2.9 The Philippine Water Revolving Fund (PWRF)

PWRF was established in 2008 to provide revolving fund loans to regional government supply units to finance clean water supply projects. PWRF blends funds from foreign aid (Official Development Assistance [ODA]) and government funds with commercial financing to lower loan interest rates and make the projects more attractive to private investors.

When it was initiated, PWRF received concessional financing for initial capital from JBIC. The blended finance scheme for JWRF was guaranteed by a standby credit line to mitigate liquidity risk and a co-guarantor to mitigate credit risk. The blended finance scheme in PWRF can reduce loan costs, reduce investment risk, and make it possible to extend the loan tenor.

Source: World Bank

Example 2.10 Africa Agriculture and Trade Investment Fund (AATIF)

AATIF is a development fund using a USD 172 million blended finance structure managed by Deutsche Bank and aimed at financing sustainable agricultural investments in Africa. The capital ownership structure in AATIF consists of several tranches with different values, risk profiles, and maturities. Junior tranche C is owned by the German Federal Ministry for Economic Cooperation and Development (BMZ) through the German Development Bank (KfW). This tranche consists of a catalytic fund that serves as the first layer to cover the risk of investment losses, making AATIF more attractive to private investors. Mezzanine tranche B is owned by Deutsche Bank, Austrian Development Bank (OeEB), and KfW, while OeEB and private investors own Senior tranche A.

Source: OECD

2.1.2. THEMATIC ALTERNATIVE FINANCING INSTRUMENTS (IPAT)

In line with efforts to achieve the seventeen SDGs as declared by the United Nations in the Addis Ababa Declaration in 2015 and the increasingly widespread application of environmental, social, and governance (ESG) principles by various companies (especially global scale corporations), various thematic development instruments continue to be developed by many countries, multilateral institutions, and companies. Thematic financing instruments can be defined as development financing instruments that are based on certain development themes.

The following are examples of several thematic development financing instruments:

1) **Thematic Bonds**

The government, private sector, or other parties can issue thematic bonds. ESG-based thematic bonds include green bonds, blue bonds, green sukuk, blue sukuk, and social bonds. Apart from various ESG-themed bonds, several countries also issue diaspora bonds.

Green bonds, blue bonds, green sukuk, and blue sukuk are types of environmentally themed bonds. Green bonds are debt instruments where the proceeds from the issuance are used to finance or refinance part or all environmentally friendly business activities.[4] Meanwhile, blue bonds are debt instruments issued by the government and/or private sector to finance blue economic activities and/or businesses in the marine and fisheries sector in a sustainable manner. Green sukuk and blue sukuk are green bonds and blue bonds, respectively, issued in accordance with sharia principles.

Social bonds, also known as social impact bonds, are debt instruments issued by the government, development banks, or other parties to raise funds from investors to finance projects that have a positive social impact on society.[5] One form of social bond is the gender bond, which is issued to finance projects or activities that can reduce gender gaps and/or empower women.

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[4] POJK No. 60 /POJK.04/2017

[5] https://corporatefinanceinstitute.com/resources/esg/social-impact-bond/

Diaspora bonds are debt securities issued to attract funds from expatriates. Several countries have issued diaspora bonds, for example, South Africa, Israel, India, Nigeria, Sri Lanka, and Nepal. The Ministry of Finance of the Republic of Indonesia had planned to issue diaspora bonds in 2020; however, this plan was postponed due to the COVID-19 outbreak.

Example 2.11 Corporate Sustainability Bond for Natural Rubber Production

The Tropical Landscapes Finance Facility (TLFF) has issued corporate sustainability bonds to carry out rubber forest reforestation in concession forest areas in Jambi and East Kalimantan. The TLFF's consortium membership includes the United Nations Environment Program (UNEP), The World Agroforestry Center (ICRAF), BNP Paribas, and ADM Capital. TLFF was formed to finance projects that focus on sustainable rural environmental development.

As of February 2018, TLFF has raised USD 95 million by issuing CSR bonds to finance rubber production in depleted concession forest areas. PT Royal Lestari Utama (RLU) received financing from this bond issuance. PT RLU is responsible for establishing large-scale rubber plantations in areas depleted by deforestation. Michelin, a global tire company, acts as a buyer, absorbing at least 75% of the proceeds from PT RLU's rubber production. The USAID Development Credit Authority (DCA) provides partial credit guarantees for these CSR bonds.

Source: Kontan, February 27, 2018

Example 2.12 Women's Livelihood Bond (WLB)

WLB is a gender bond the Impact Investment Exchange (IIX) issued to finance women's empowerment programs. IIX is a Singapore-based financial management institution that specifically manages sustainable financial instruments. USAID and the Australian Department of Foreign Affairs and Trade (DFAT) act as WLB guarantors.

IIX distributed funds obtained from the issuance of WLB to debtors engaged in women's empowerment in Southeast Asia, including (i) SAMIC PLC, a microfinance institution providing financial services to poor communities in rural and urban areas in Cambodia; (ii) NWTF, a Philippine-based microfinance institution providing financial services for women; and (iii) Viet Phu Payment Services, a financing company in Vietnam providing employee benefit programs for female workers in Vietnam.

Source: Impact Investment Exchange (IIX)

2) **Non-Bond IPAT**

Several types of thematic AFSI are not in the form of bonds, for example, carbon trading schemes, carbon charges, circular financing instruments, plastic credit instruments, and debt swap schemes.

Perpres No. 98 of 2021 defines carbon trading as a market-based mechanism to reduce greenhouse gas (GHG) emissions through buying and selling carbon units.[6] Carbon units are defined as proof of carbon ownership in the form of a certificate or technical approval expressed in one ton of carbon dioxide recorded in the National Climate Change Control Registry System (SRN PPI).[7] SRN PPI is a management system, providing web-based data and information about actions and resources for climate change mitigation, climate change adaptation, and the economic value of carbon in Indonesia.[8] In the carbon trading mechanism, business actors try to reduce their GHG emissions to not exceed the upper GHG emission limit set by the government or a limit set voluntarily by the business actors. Business actors whose GHG emissions exceed the upper limit (said to have an "emissions deficit") can purchase carbon units from business actors whose emissions are below the upper limit of GHGs ("surplus" emissions) as a form of company obligation toward GHG-reduction efforts. Even though the GHG category includes various types of gas, carbon gas is the GHG that is most intensely emitted from the activities of business actors, so reducing carbon gas emissions has become the focus of GHG reduction efforts in various countries.

Meanwhile, Perpres No. 98 of 2021 defines carbon charge as a state levy, either central or regional, imposed on goods and/or services that have the potential and/or actual carbon content and/or businesses and/or activities that have the potential for carbon emissions and/or emit significant carbon that have a negative impact on the environment and/or the performance of mitigation actions.[9,10] Carbon charges can take the form of a carbon tax or non-tax state levy on carbon emissions. Government Regulation (PP) No. 50 of 2022 defines carbon tax as a tax imposed on carbon emissions that have a negative impact on the environment.[11]

Circular financing instruments can be defined as financing instruments used to fund new or ongoing development projects by taking into account aspects of the circular economy. The United Nations Industrial Development Organization (UNIDO) defines a "circular economy" as a mechanism for designing products produced in the economy so that they are durable, reusable, and recyclable and allow new products to be produced using materials from old products (UNIDO, 2017).

Plastic credits are certificates sold by plastic waste processing companies to companies that produce plastic waste in their production, stating the amount of plastic waste that has been recycled.

[6] Article 1 Number 17 of Perpres No. 98 of 2021 concerning Implementation of Carbon Economic Value to Achieve Nationally Determined Contribution Targets and Control of Greenhouse Gas Emissions in National Development.

[7] Article 1 Number 15 of Perpres No. 98 of 2021.

[8] Article 1 Number 14 of Perpres No. 98 of 2021.

[9] Article 1 Number 24 of Perpres No. 98 of 2021.

[10] Article 1 Number 7 of Perpres No. 98 of 2021 defines Climate Change Mitigation Actions as an action that can reduce GHG emissions, increase the absorption of carbon and/or storage/strengthen carbon deposits.

[11] Article 1 Number 47 of Governmental Regulation No. 50 of 2022 concerning Procedures for Implementing Tax Rights and Fulfilling Tax Obligations.

Companies that produce plastic waste buy plastic credits as a form of responsibility for maintaining the environment.

A debt transfer scheme is a development financing scheme that allows developing countries to transfer debt payment obligations to creditors from developed countries by providing financing in domestic currency for certain activities or projects approved by creditors. One form of debt transfer scheme is the debt-for-nature swap scheme, aimed at managing and preserving natural resources in developing countries. In Indonesia, debt transfer schemes have been implemented in the health and education sectors and in the environmental sector. The debt transfer scheme can be used for the 2025–2045 RPJPN, but Indonesia's status as an upper middle-income country—rather than a low-income country—could reduce the opportunity to attract donors from abroad to finance this scheme.

Example 2.13 Emission Trading Systems in the European Union, China, and Indonesia

The European Union's (EU) emissions trading system (ETS) began operating in 2005 and is the world's first carbon market. The EU's ETS seeks to achieve the primary objective of "carbon neutral" (i.e., achieving a condition where the amount of carbon released into the atmosphere is equal to the amount of carbon absorbed from the atmosphere) in the EU by 2050, with an intermediate target of reducing GHG emissions by at least 55% in 2030 compared to emission levels in 1990. In the EU's ETS, policymakers set emission upper limits, which must be abided by business actors in the European Union. As of 2021, the EU's ETS covers more than 10,400 factories and power plants and around 350 airlines operating in 27 EU countries and several neighboring non-EU countries (Iceland, Norway, Liechtenstein, and Switzerland). By the end of 2019, the EU's ETS had reduced emissions in the European Union to 24% under 1990 levels.

China's ETS began operations in 2021 and is the world's largest carbon market. ETS China has a target to achieve "carbon neutrality" in China by 2060, with two intermediate targets: reducing carbon emissions per unit of gross domestic product (GDP) by 18% by 2025 compared to 2020 levels and by 65% compared to 2005 levels. China's ETS regulates more than 2,000 companies operating in the electricity sector that annually emit more than 26,000 tCO_2.

On September 18, 2023, Indonesia officially launched the Indonesian Carbon Exchange (IDXCarbon). There were four types of carbon trading mechanisms at IDXCarbon at the time of its launch: auction, regular trading, negotiated trading, and marketplace. The providers of carbon units in the initial IDXCarbon trade are Pertamina New and Renewable Energy (PNRE) and PT Pertamina Geothermal Energy Tbk. Meanwhile, the companies that acted as buyers of carbon units in the initial IDXCarbon trade included PT Bank Central Asia Tbk., PT Bank CIMB Niaga Tbk., PT Bank DBS Indonesia, PT Bank Mandiri (Persero) Tbk., PT BNI Sekuritas, PT BRI Danareksa Sekuritas (part of PT Bank Rakyat Indonesia [Persero] Tbk.), PT CarbonX Bumi Harmoni, PT MMS Group Indonesia, PT Multi Optimal Research and Education, PT Pamapersada Nusantara, PT Pelita Air Service, PT Pertamina Hulu Energi, PT Pertamina Patra Niaga, PT Truclimate Decarbonization Indonesia, and PT Air For All (Fairatmos).

It is hoped that the operation of IDXCarbon will help Indonesia achieve net zero emissions in 2060 or sooner.

Source: European Commission, Katadata Insight Center, International Carbon Action Partnership, Bursa Efek Indonesia

Example 2.14 Debt Transfer Scheme in Indonesia

The Ministry of Finance stated that by the end of September 2022, Indonesia had received commitments to eliminate debt through the debt transfer scheme with a total value of USD 335 million from four creditor countries: (i) Germany (this scheme is linked to project implementation in the education, environment, and health sectors); (ii) Italy (housing and residential sector); (iii) Australia (health sector); and (iv) the United States (environmental sector, namely related to the preservation of tropical forests). Of the total value of this commitment, USD 291 million has been realized through 175 projects and programs as of the end of September 2022.

Prior to the implementation of the debt transfer scheme announced by the Ministry of Finance, Indonesia had received debt relief through the debt transfer scheme from Italy amounting to USD 24.2 million and EUR 5.7 million in 2005 for the reconstruction of Aceh and Nias after the 2004 Tsunami.

Source: Ministry of Finance, Kontan, October 18, 2022

2.1.3. SOCIAL AND/OR RELIGIOUS PHILANTHROPY FINANCING (DFSK) SCHEMES

Indonesians are known for being generous and charitable. According to the Charities Aid Foundation (CAF) report, Indonesia has always been ranked first in the list of most generous countries in the world annually from 2017 to 2021. In 2021, at least 8 out of 10 Indonesians have donated money, and at least 6 out of 10 Indonesians have spent time doing social activities.[12] In line with the generous nature of its people, Indonesia has many philanthropic institutions that are active in providing social funds and carrying out humanitarian activities. Various philanthropic institutions, both domestic and foreign, are actively involved in distributing social funds and doing various humanitarian activities in Indonesia. In 2020, 106 philanthropic institutions were members of the Indonesian Philanthropy Association, consisting of 30 religious and philanthropic institutions,[13] 17 corporate philanthropic institutions, 18

[12] Charities Aid Foundation (CAF). (2022). World Giving Index 2022: A global view of giving trends. London: CAF, 2022. p. 6. https://www.cafonline.org/about-us/publications/2022-publications/caf-world-giving-index-2022
[13] Does not include BAZNAS and BWI

family philanthropic institutions, 4 media philanthropic institutions, and 37 independent philanthropic institutions.[14]

Religious, philanthropic institutions have long been involved in various philanthropic activities in Indonesia. This is because helping fellow humans experiencing difficulties is an obligation for adherents of every religion. The National Zakat Management Agency (BAZNAS) and the Indonesian Waqf Agency (BWI) are two Islamic religious institutions that actively distribute social funds. In 2022, BAZNAS collected IDR 22 trillion (USD 1.41 billion) in zakat funds, an increase compared to IDR 14 trillion (USD 895.66 million) in 2021.[15] Institutions from other religions are also active in distributing social funds in Indonesia. The potential for religious philanthropy funds in Indonesia is large, but these funds have not been used optimally to support national development financing.

Not all religious and social funds are applicable for development financing activities compatible with the financing needs in the RPJPN. However, religious and social funds can complete some of the national financing needs as long as they comply with the requirements for the use of these funds. For example, zakat can only be given to eight groups of Muslim recipients: (i) the destitute; (ii) the needy; (iii) *amil zakat* (zakat collector); (iv) converts; (v) *riqab* (slave or servant) for their emancipation; (vi) *gharim* (those trapped by debt); (vii) *fisabilillah* (one fighting for the sake of God); and (viii) *ibnu sabil* (a traveler that does not have enough money during his journey). Fatwa of the Indonesian Ulema Council (MUI) No. 4 of 2003 concerning the Use of Zakat Funds for Istitsmar (investment) allows the use of zakat as business capital for the destitute and needy who are Muslims.

Philanthropic funds in Indonesia also come from various business entities or companies (especially companies in the form of limited liability companies [PT]) and are generally closely related to the company's vision and mission. In practice, there are two types of mechanisms for managing corporate philanthropy in Indonesia: (i) through certain foundations whose management of philanthropic funds is separate from the company's business activities; or (ii) by making philanthropic funds part of the company's corporate social responsibility (CSR). Specifically for the CSR of companies in the form of PT, Article 74 of Law No. 40 of 2007 concerning Limited Liability Companies (UU PT) states that companies that carry out business activities in the field and/or related to natural resources are obliged to carry out social and environmental responsibilities. Article 1 Number 3 of Law No. 40 of 2007 defines social and environmental responsibilities as the company's commitment to participate in sustainable economic development to improve the quality of life and a beneficial environment for the company itself, the local community, and society in general.[16]

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[14] https://filantropi.or.id/direktori/. Link accessed on May 18, 2023

[15] Outlook Zakat Indonesia 2023

[16] Law No. 40 of 2007 concerning Limited Liability Companies in conjunction with Law No. 6 of 2023 concerning the Determination of Governmental Regulation in lieu of Law No. 2 of 2022 concerning Job Creation.

The mass media also plays an active role in collecting and distributing philanthropic funds. The media, particularly television stations, often start crowdfunding following the occurrence of natural disasters or when collecting funds for the medical treatment of the poor. Philanthropic funds also come from family philanthropic institutions (i.e., philanthropic institutions whose main funding comes from individuals and generally carry out the vision and mission of the founding family) and independent philanthropic institutions (i.e., philanthropic institutions that receive their main funding from institutional donors and/or the public in general).[17]

In 2018–2020, philanthropic institutions in Indonesia have provided benefits to 91.7 million recipients. Philanthropic funds in Indonesia are provided in the form of money or foodstuffs for 368,588 households, the construction of 1,445 school buildings, the construction of 8,937 public facilities, and 1,036 advocacy activities. During that period, 32,115 volunteers have been engaged in philanthropic activities. A study from the Indonesian Philanthropy Association shows an increase in philanthropic activities in Indonesia during the COVID-19 pandemic.[18] The Indonesian Philanthropy Association identified philanthropic institutions' five main areas of activity in Indonesia: (i) education (39.7%); (ii) economic empowerment (24.1%); (iii) climate and environment (18.8%); (iv) advocacy (17.4%); and (v) health (17%). Philanthropic activities related to protecting vulnerable groups, such as the elderly or persons with disabilities, are still relatively limited.[19]

The following are several examples of philanthropic activities in Indonesia.

Example 2.15 Wahana Visi Indonesia (WVI) Philanthropy Fund

WVI is a Christian philanthropic organization that collects and distributes funds from various donors for various humanitarian and community empowerment activities in Indonesia with no discrimination of the religion, tribal association, ethnicity, or gender of the recipients. WVI collaborates with the government and various other stakeholders in carrying out its activities spread across 15 provinces in Indonesia. WVI implements activities in the fields of child protection, health, education, economics, advocacy, and disaster response. Some examples of WVI's activities in empowering communities and supporting sustainable development include providing clean water facilities for communities, building sanitation facilities, and building reading houses in remote areas in Indonesia.

Source: Wahana Visi Indonesia (WVI)

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[17] Indonesian Philanthropy Association. (2022). Indonesia Philanthropy Outlook: Development and Projections of Philanthropy in Indonesia in 2022. Jakarta: Indonesian Philanthropy Association. p. 17.

[18] Op.cit. p. 27.

[19] Op.cit. p. 18.

Example 2.16 Buddhist Tzu Chi Charity Foundation Philanthropic Fund

The Buddhist Tzu Chi Charity Foundation is a Buddhist philanthropic organization based in Taiwan and carries out humanitarian activities in various countries, including Indonesia. The Buddhist Tzu Chi Charity Foundation in Indonesia operates in several activity areas: charity, health, education, humanist culture, and environmental conservation. During the COVID-19 pandemic, the Buddhist Tzu Chi Charity Foundation collaborated with the government to provide free vaccinations in various regions in Indonesia.

Source: Indonesian Buddhist Tzu Chi Charity Foundation

Example 2.17 Tanoto Foundation Philanthropic Fund

The Tanoto Foundation is a family philanthropic institution in the education sector founded by businessman Sukanto Tanoto and his wife, Tinah Bingei Tanoto. Tanoto Foundation launched the Pelita Pendidikan (Light of Education) program in 2010 to improve the quality of education in rural areas in Indonesia by providing training to teachers and improving educational infrastructure in rural areas. In 2018, the program was renamed PINTAR and expanded to include schools in urban areas.

In 2016, the Tanoto Foundation funded the SDGs implementation program in Riau Province, which the Riau Provincial Government and UNDP launched. Since 2018, the Tanoto Foundation has provided TELADAN scholarships for students in Indonesia, covering payment of education costs, living costs, and leadership training. In the same year, Filantropi Indonesia appointed the Tanoto Foundation to lead the education philanthropy fund cluster.

Source: Tanoto Foundation

Example 2.18 Tahija Foundation Philanthropic Fund

The Tahija Foundation is a philanthropic institution in the health sector founded by businessman Julius Tahija and his wife, Jean Tahija. For 12 years, the Tahija Foundation has sponsored the World Mosquito Program (WMP) laboratory at Gadjah Mada University to conduct research and control efforts for dengue hemorrhagic fever in Yogyakarta Province. During the COVID-19 pandemic, the Tahija Foundation, together with the Health Research and Development Agency (Balitbangkes) of the Ministry of Health of the Republic of Indonesia and Gadjah Mada University (UGM) made the WMP laboratory a diagnostic laboratory for the COVID-19 virus. The Tahija Foundation also donated medical equipment for health workers dealing with the outbreak. Apart from working in the health sector, the Tahija Foundation also carries out activities in the fields of education, culture, social services, and nature conservation.

Source: Kumparan, May 4, 2020

2.1.4. REGIONAL DEBT FINANCING INSTRUMENTS (IPUD)

Several types of regional debt financing instruments (IPUD) can be used as alternative financing instruments for financing projects in the regions. Article 1 Number 78 of Law No. 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments states that regional debt financing is defined as any regional revenue that must be repaid, either in the relevant budget year or in subsequent budget years. In general, IPUD can be defined as regional government financial instruments taking the form of loans or debt securities to obtain funds recorded as regional revenues, which must be repaid, either in the relevant budget year or in subsequent budget years.

Article 154 Paragraph (1) of Law No. 1 of 2022 mentions three types of IPUD: (i) regional loans; (ii) regional bonds; and (iii) regional sharia bonds (sukuk). Regional loans, regional bonds and regional sukuk can be used to finance regional infrastructure development in addition to other regional financial management functions. There are several provisions regarding regional debt financing in Article 154 of this Law. First, regional debt financing is used to finance government affairs that fall under the region's authority (Paragraph (2)). Second, the central government does not guarantee regional debt financing (Paragraph (3)). Third, regional governments are prohibited from making direct financing from foreign parties (Paragraph (4)). Fourth, the net value of regional debt in a particular year must first obtain approval from the Regional People's Representative Council (DPRD) to be given during the discussion of the regional budget (Paragraphs (5) and (6)).

Article 1 Number 79 of Law No. 1 of 2022 defines regional loans as regional debt financing bound by a loan agreement and not in the form of security, which results in the region receiving a sum of money or receiving benefits of monetary value from another party so that the region is burdened with the obligation to repay. Article 155 Paragraph (1) states that regional loans can be sourced from (i) central government; (ii) other regional governments; (iii) bank financial institutions; and/or (iv) non-bank financial institutions. Meanwhile, Article 155 Paragraph (5) states that regional loans can be conventional or sharia.

PP No. 56 of 2018 states the following requirements for regional loans:[20] (i) the remaining amount of regional loans and the amount of loans to be withdrawn to not exceed 75% of the total general revenues of the previous year's regional budget; (ii) the region's financial capacity to repay the loan (DSCR) ratio be more than or equal to 2.5; (iii) no arrears to the central government, if the loan is to originate from the central government; and (iv) must obtain approval from the Regional Parliament for medium- and long-term loans.

Article 1 Number 80 of Law No. 1 of 2022 states that regional bonds are securities in the form of acknowledgment of debt issued by the regional government. Meanwhile, Article 81 defines regional sukuk as securities based on the sharia principle as evidence of the participation in regional sukuk assets

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[20] https://djpk.kemenkeu.go.id/?page_id=328

issued by the regional government. Article 157 Paragraph (2) states that regional bonds and regional sukuk are issued through the domestic capital market and in the rupiah currency. Regional governments can only issue regional bonds and regional sukuk in the form of revenue bonds, namely bonds and sukuk that obtain income from rewards from financing certain projects. Article 32 Paragraph (3) of PP No. 56 of 2018 concerning Regional Loans states that it is prohibited for regional governments to issue index bonds.[21] Several provincial governments in Indonesia are preparing to issue regional bonds and/or sukuk, but none have issued them by the time this report was written.

Only a few regional governments have utilized IPUD. One of the problems faced is that existing regulations do not support the use of these instruments. For example, not all regional governments can fulfill one of the conditions for obtaining a regional loan, namely that the ratio of the regional financial capacity to repay the regional loan, which is determined to be at least 2.5. Another problem is the difficulty faced by regional governments in issuing regional bonds and/or regional sukuk because there is no guarantee from the central government for their issuance, and there has been no assessment by rating agencies regarding the ability of the regional government to issue these financing instruments.

The following are several examples of the use of IPUD to finance regional development in Indonesia and in several other countries.

Example 2.19 Loan from PT Sarana Multi Infrastruktur (SMI) to Regional Governments

PT SMI is an SOE whose shares are wholly owned by the Indonesian government, represented by the Ministry of Finance. PT SMI was founded in 2009 as a non-bank financial institution, specifically to support the financing of infrastructure development in Indonesia. PT SMI is actively involved in various infrastructure financing activities in Indonesia, including infrastructure development initiated by various regional governments.

For example, PT SMI provided a loan of IDR 180 billion (USD 11.52 million) to the Riau Provincial Government in 2022 to finance seven strategic projects in the province. PT SMI also disbursed a loan of IDR 100 billion (USD 6.40 million) to the Southeast Maluku Regency Government in 2021 to build four roads in the regency.

Source: PT SMI

[21] Index bonds are bonds that use a certain index so that their nominal value at maturity may not be the same as the nominal value at issuance.

Example 2.20 Loan from Regional Development Banks (BPDs) to Regional Governments

Even though regional development banks (BPDs) have long existed in various regions in Indonesia, only a few regional governments have utilized loans from BPDs to finance regional infrastructure development. Several BPDs that are active in disbursing loans to the regional governments include PT Bank DKI, PT Bank Pembangunan Daerah Maluku-Maluku Utara, PT Bank Pembangunan Daerah Jawa Tengah, and PT Bank Aceh Syariah. Bank DKI, for example, distributed IDR 48.37 trillion (USD 3.09 billion) of credit in 2022.

One of the reasons why the utilization of BPD loans by regional governments has not been optimal is that many regional governments are not financially qualified to obtain credit. When more regional governments can meet the eligibility requirements to receive credit, BPD loans will become an important alternative financing instrument in the future.

Source: ASBANDA, Tempo.co

Example 2.21 Regional Bonds in Other Countries

The use of regional bonds as a financing instrument has been widely practiced in developed countries, such as the United States, Japan, England, and European Union countries (including Sweden, Germany, France, and Switzerland). For example, the Tennessee Valley Authority (TVA) in the United States issues TVA Power Bonds to finance infrastructure development in the state of Tennessee. The Tokyo Metropolitan Government (TMG) in Japan issues TMG Bonds in yen and U.S. dollars, green bonds, and social bonds to finance regional budget deficits and/or financing infrastructure projects and/or public services in the Tokyo Metropolitan area. Meanwhile, the United Kingdom has the UK Municipal Bonds Agency to help local UK governments by issuing municipal bonds to finance infrastructure and housing projects.

Only a few developing countries have issued regional bonds, including India and Morocco. Several cities in India have so far issued regional bonds, including Pune, Hyderabad, Indore, Amravati, Bhopal, Visakhapatnam, Ahmedabad, Surat, Ghaziabad, and Lucknow. Meanwhile, the city of Agadir in Morocco launched its regional bonds in 2022 with investment support from the European Bank for Reconstruction and Development (EBRD) to finance green infrastructure projects.

Source: TVA, TMG, UK Municipal Bond Agency, EBRD

2.1.5. UTILIZATION OF STATE-OWNED ASSETS AND/OR REGIONAL ASSETS (UAND) SCHEME

The utilization of state-owned assets can be defined as the use and/or utilization of assets (wealth) owned by the state to finance development. State-owned assets can take the form of unseparated state assets and separated state assets. State assets that are not separated are state property (BMN), namely goods obtained or purchased at the expense of the state budget or through other legitimate acquisitions. Meanwhile, separated state assets are state assets originating from the state budget and/or other sources that are invested on a long-term and sustainable basis by the central government and managed separately from the state budget mechanism.[22,23]

There are several types of schemes and/or instruments for utilization of state-owned assets: (i) recycling of state-owned assets; (ii) state-owned asset-backed securities; (iii) value capture of state-owned assets; and (iv) investment in state-owned assets managed by an investment management institution, namely a Sovereign Wealth Fund (SWF) belonging to the Indonesian Government.[24]

Recycling state-owned assets is the lease or sale of state-owned assets to the private sector, with all funds received being invested in developing new infrastructure. The state-owned assets recycling scheme is important in connection with transferring the state capital from DKI Jakarta to the new national capital (IKN) of Nusantara. Article 27 of Law No. 3 of 2022 concerning the National Capital states that state property previously used by ministries/institutions in the special capital region of Jakarta Province and/or other provinces must be transferred to the minister managing government affairs in the financial sector. Article 28 Paragraph (2) of Law No. 3 of 2022 states that management of state property can be carried out by transfer and/or utilization. The central government plans to use an asset recycling scheme as one of the financing mechanisms for the development of the Indonesian IKN, for example, by leasing buildings belonging to the central government in Jakarta to private parties.

Asset-backed securities (in Indonesian, *efek beragun asset* [EBA]) are securities that can take the form of debt securities or participation letters issued by the issuer of these securities, whose payment is mainly sourced from a collection of receivables.[25] This collection of receivables becomes collateral for the securities issued. State-owned EBA is defined as securities issued based on the securitization of state-owned receivable assets. EBA can take the form of conventional securities or sharia securities.[26] Basically, EBA involves a securitization process, namely the transformation of illiquid assets into liquid ones by purchasing financial assets in the form of receivables from the original creditor that are then used as collateral for the EBA issuance. Based on the type of securitization, two types of EBA are issued

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[22] https://www.djkn.kemenkeu.go.id/kpknl-metro/baca-artikel/13760/Kekayaan-yang-Dikuasai-Negara-vs-Kekayaan-yang-Dimiliki-Negara.html

[23] Article 1 Number 1 of Minister of Finance Regulation (PMK) No. 246/PMK.06/2016 concerning Administration of Separated State Assets.

[24] SWF is a fund or special investment arrangement owned by the government to store, regulate, and manage government financial assets to achieve certain financial goals. (Das et al., 2009).

[25] EBA is defined according to Article 1 Number 5 of Perpres No. 19 of 2005 concerning Secondary Housing Financing in conjunction with Perpres No. 1 of 2008 concerning Amendments to Perpres No. 19 of 2015.

[26] There is a difference between the use of assets in EBA and the use of assets as a basis for issuance in SBSN or government sukuk. In EBA, the securities issued are collateralized against a collection of receivables, while SBSN is issued based on real assets in the form of state property.

in Indonesia, namely contract asset-backed securities in the form of collective investments (EBA-KIK) and asset-backed securities in the form of participation letters (EBA-SP).[27]

Value capture is an effort to identify and obtain increased economic value from investments, economic activities, and government policies.[28] Value capture of state-owned assets is the utilization of increases in the value of state-owned assets resulting from investments, activities, and/or policies of the central government. One form of state-owned asset value capture is state-owned land value capture.

Financing for development projects can also be carried out by an investment management agency (LPI), which, in practice, is better known as the Indonesia Investment Authority (INA). INA was founded in 2020 and is fully owned by the Indonesian government.[29] INA was established with the aim of increasing and optimizing the value of Indonesian government investments, which are managed on a long-term basis to support sustainable development.[30] INA's capital comes from state-owned investment (PMN) and/or other sources. PMN for INA can come from[31] (i) cash funds; (ii) state property; (iii) state receivables from SOEs or limited liability companies; and/or (iv) state-owned shares in SOEs or limited liability companies.

Where a legal basis exists, the asset utilization scheme can become an alternative financing scheme for future regional development, for example, (i) regional asset recycling; (ii) regional EBA; and (iii) acquisition of regional asset value. The basic principles and mechanisms for regional asset utilization are the same as those of state-owned assets, the difference being that the object is regionally owned. However, by the time of writing, no statutory regulation could be used as a legal basis for regional governments to utilize the regional asset utilization scheme.

The following are several examples of implementing the state-owned asset utilization scheme.

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[27] KIK-EBA is a contract between the investment manager and the custodian bank that binds the EBA holder where the investment manager is authorized to manage the collective investment portfolio and the custodian bank is authorized to carry out collective custody. Meanwhile, EBA-SP is a security consisting of a group of mortgages issued through a securitization process so that it becomes a fixed-income investment instrument that can be transacted on the secondary market. See https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_237521.aspx

[28] https://kpbu.kemenkeu.go.id/read/1109-1270/umum/kajian-opini-publik/pemanfaatan-land-value-capture-lvc-sebagai-pembiayaan-kreatif-dan-inovatif

[29] Article 2 Paragraph (1) of PP No. 74 of 2020 concerning Investment Management Institutions

[30] Article 5 of PP No. 74 of 2020 concerning Investment Management Institutions

[31] Article 3 Paragraphs (1) and (2) of PP No. 74 of 2020 concerning Investment Management Institutions

Example 2.22 Asset-Backed Securities (EBA) PT Sarana Multigriya Finansial

PT Sarana Multigriya Finansial (PT SMF) is an SOE that is wholly owned by the Indonesian government. Funds obtained from the sale of EBA by PT SMF are used to provide loans and to finance housing development projects in Indonesia. PT SMF has issued EBA collective investment contracts (EBA-KIK) and EBA letters of participation (EBA-SP) to institutional investors since 2009 and began issuing EBA-SP to retail investors in 2018. In 2022, PT SMF carried out securitization with a total value of IDR 500 billion (USD 31.99 million), distribution of housing loans worth IDR 11.3 trillion (USD 722.92 million), and housing construction funding of IDR 3.9 trillion (USD 249.50 million).

Source: PT SMF

Example 2.23 INA's Investment in PT Pertamina Geothermal Energy

Indonesia's Sovereign Wealth Fund (INA) and Abu Dhabi-based renewable energy company Masdar own shares in PT Pertamina Geothermal Energy Tbk. through an initial public offering (IPO) process. In Deal Street Asia, the President Director of PT Mandiri Sekuritas Oki Ramadhana said SWF and Masdar respectively own 5% and 15% shares in the state-owned geothermal company. The investment value of both is around USD 480 million.

Source: Katadata, February 27, 2023

2.1.6. COMMUNITY-BASED CROWDFUNDING (UDSM) SCHEME

Community-based crowdfunding (UDSM) is a financing scheme in the form of direct community participation by contributing funds to support certain projects or activities. The UDSM scheme can also provide access to financing for parties who find it difficult to obtain funding through conventional channels, including projects that do not meet traditional financial institutions' requirements or have insufficient collateral.

UDSM schemes can be an alternative funding source for development projects to reduce dependence on development financing on one funding scheme. However, in general, the amount of funds that can be raised from UDSM schemes is not as large as the funds that can be raised using other alternative financing schemes and/or instruments. Therefore, the UDSM scheme is more suitable for development projects on a relatively small scale. In addition, the UDSM scheme is spontaneous and sporadic, so the government needs to integrate and align projects financed by this scheme with existing development plans.

Four types of UDSM schemes are often used: (i) donation-based crowdfunding scheme; (ii) reward-based crowdfunding scheme; and (iii) debt-based crowdfunding scheme; and (iv) equity-based crowdfunding scheme. Debt-based crowdfunding schemes and equity-based crowdfunding schemes are relatively new in Indonesia. Although several regulations from the OJK already regulate crowdfunding schemes in Indonesia, additional legal regulations will be needed due to the rapid development of innovation in this financing scheme. Transparency and accountability by the institutions providing crowdfunding services, as well as protection of the rights of donors and/or investors, need to be regulated more strictly to reduce the risk of misusing the funds raised.

Example 2.24 Kitabisa.com

Kitabisa.com is one of the largest pioneering online platforms facilitating social crowdfunding in Indonesia. Founded in 2013, kitabisa.com has encouraged more than 6 million people to donate and more than 100,000 social initiatives to crowdfund, helped more than 3,000 foundations/non-governmental organizations (NGOs)/social institutions to carry out successful and accountable fundraising initiatives, and supported more than 250 CSR programs from various companies. Every month, at least 1.5 million donation transactions and 4,000 social action campaigns are managed through the kitabisa.com platform. In 2020, kitabisa.com succeeded in connecting more than 3 million people to collectively raise more than IDR 835 billion (USD 53.42 million) for tens of thousands of fundraisers, most of which were intended for medical and health, humanitarian, natural disaster victim, and social initiatives.

Source: kitabisa.com

Example 2.25 GoFundMe

GoFundMe is one of the largest online platforms for social crowdfunding and is based in the United States. Parties who need funds (fundraisers) can ask for donations through this platform, and the public can directly make donations. Fundraisers can set a target for the funds needed over a certain period of time and send them directly to the fundraiser's account. GoFundMe also allows fundraisers to make donations in groups to increase the scale of the donation campaign being carried out and have a wider impact. GoFundMe has expanded to 19 countries outside the United States. This means that GoFundMe donation campaigns can be conducted in those 19 countries, and donors from those 19 countries can also contribute. As of the time this study was compiled, around 100 million people had used the GoFundMe platform, with a total amount of funds of USD 25 million raised from more than 200 million donors.

Source: GoFundMe.com

2.1.7. OTHER ALTERNATIVE FINANCING SCHEMES AND INSTRUMENTS (SIPAL)

This category accommodates AFSI that may occur in the future. In line with the increasing need for development and the potential for various alternative financing, it is hoped that other financing schemes will emerge, either blended, thematic, or initiatives from local governments and the community.

Table 2.1 below summarizes the seven categories of AFSI, examples of instruments, and definitions and sources of funds.

TABLE 2.1 CATEGORIES OF AFSI				
NO.	CATEGORY OF SCHEME/INSTRUMENT	NAME OF SCHEME/INSTRUMENT	DEFINITION OF SCHEME/INSTRUMENT	SOURCE OF FUNDS
1	PPP	PPP Contract	A financing scheme for development projects and/or operation of infrastructure and/or provision of domestic services involving the government (either central government or regional governments) and a business entity, with one or more parties contributing financing, support, and responsibility for the risks of the project	– Government funds – Private funds – Philanthropic funds (for PPP with a blended finance structure)
2	IPAT	Green Bond	Debt securities issued to finance environmentally sound business activities	– Funds from domestic financial institutions – Funds from domestic retail investors – Funds from foreign investors
		Green Sukuk	Debt securities based on sharia principles issued to finance environmentally sound business activities	– Funds from domestic financial institutions – Funds from domestic retail investors – Funds from foreign investors
		Blue Bond	Debt securities issued by the government and private sector to finance blue economy activities and/or businesses in the marine and fisheries sector in a sustainable manner	– Funds from domestic financial institutions – Funds from domestic retail investors – Funds from foreign investors
		Blue Sukuk	Debt securities based on sharia principles issued by the government to finance blue economy activities and/or businesses in the marine and fisheries sector in a sustainable manner	– Funds from domestic financial institutions – Funds from domestic retail investors – Funds from foreign investors

TABLE 2.1 CATEGORIES OF AFSI

NO.	CATEGORY OF SCHEME/INSTRUMENT	NAME OF SCHEME/INSTRUMENT	DEFINITION OF SCHEME/INSTRUMENT	SOURCE OF FUNDS
		Social Bond	Debt securities issued to finance projects that have a positive social impact on community welfare	– Funds from domestic financial institutions – Funds from domestic retail investors – Funds from foreign investors – Funds from philanthropic investors
		Diaspora Bond	Debt securities issued to attract funds from expatriates	Funds from Indonesian expatriates living overseas
		Carbon Tax	Taxes imposed on carbon emissions that have a negative impact on the environment	Funds from companies that carry out production activities that cause negative externalities to the environment
		Carbon Charge	State charges in the form of taxes and/or non-tax levies imposed on goods, services, or activities that can cause carbon emissions that have a negative impact on the environment	Funds from companies that carry out production activities that cause negative externalities to the environment
		Circular Finance	Financing instruments used to fund new or ongoing development projects with attention to circular economy aspects	Funds from companies that carry out production activities that cause negative externalities to the environment
		Plastic Credit	Certificates sold by plastic waste processing companies to companies that produce plastic waste in their production, stating the amount of plastic waste that has been recycled. Companies that produce plastic waste buy plastic credits as a form of responsibility for maintaining the environment	Funds from companies that carry out production activities that cause negative externalities to the environment

TABLE 2.1 CATEGORIES OF AFSI				
NO.	CATEGORY OF SCHEME/INSTRUMENT	NAME OF SCHEME/INSTRUMENT	DEFINITION OF SCHEME/INSTRUMENT	SOURCE OF FUNDS
		Debt Swap Scheme	A development financing scheme that allows developing countries to transfer debt payment obligations to creditors from developed countries by providing financing in domestic currency for activities or projects approved by the creditors.	Funds from developed countries
3	DFSK Scheme	Zakat	Zakat is property that is a obligatorily contribution by a Muslim individual or business entity to be given to those entitled to receive it in accordance with Islamic law	Funds from a religious congregation
		Property Waqf	Property handed over by the party doing the waqf (grant) to the waqf manager to be used forever or for a certain period of time according to their interests for the purposes of worship and/or general welfare according to Islamic law	Funds from a religious congregation
		Religious Social Funds	Philanthropic funds collected and distributed by a congregation and/or certain religious institution for the benefit of the congregation and/or social and humanitarian activities	Funds from a religious congregation
		Corporate Social Responsibility	Funds distributed by a company for community development activities and/or environmental maintenance as a form of the company's social and environmental responsibility	Social funds from private corporations (SOE or non-SOE)
		Social Philanthropic Funds	Philanthropic funds originating from individuals, families, foundations, or other institutions that are channeled for social and humanitarian activities	Social funds from institutions, foundations, or individual donor funds from a religious congregation
4	IPUD	Regional Loans from the Central Government	Regional loans received by the regional government from the central government	Funds from the central government

TABLE 2.1 CATEGORIES OF AFSI

NO.	CATEGORY OF SCHEME/INSTRUMENT	NAME OF SCHEME/INSTRUMENT	DEFINITION OF SCHEME/INSTRUMENT	SOURCE OF FUNDS
		Regional Loans from Other Regional Governments	Regional loans received by regional governments from other regional governments	Funds from other regional governments
		Regional Loans from Banking Institutions	Regional loans received by regional governments from domestic bank financial institutions	Funds from banking institutions
		Regional Loans from Non-Bank Financial Institutions	Regional loans received by regional governments from domestic non-bank financial institutions	Funds from non-bank financial institutions
		Municipal Bonds	Securities in the form of acknowledgment of debt issued by the regional government	– Funds from domestic financial institutions – Funds from domestic retail investors
		Regional Sukuk	Securities based on sharia principles as proof of participation in regional sukuk assets issued by the regional government	– Funds from domestic financial institutions – Funds from domestic retail investors
5	UAND Scheme	State or Regional Government Asset Recycling	Lease or sale of state or regional government assets to the private sector, with all funds received invested in the development of new infrastructure	Assets belonging to the government (central government or regional government) or SOEs that are leased or sold to non-SOE private parties
		Asset-Based Securities	Securities issued based on securitization of state-owned receivable assets	Assets owned by the government (central government or regional government) or private sector (SOE or non-SOE) used as collateral for the issuance of securities
		Utilization of State or Local Government Asset Value Capture	Utilization of increased value of state-owned assets resulting from investments, activities, and policies of the central government	Assets belonging to the central government or regional government

TABLE 2.1 CATEGORIES OF AFSI				
NO.	CATEGORY OF SCHEME/INSTRUMENT	NAME OF SCHEME/INSTRUMENT	DEFINITION OF SCHEME/INSTRUMENT	SOURCE OF FUNDS
		Utilization of State or Local Government Land Value Capture	Utilization of increased land value resulting from investment, activities, and central government policies in an area	Land owned by the central government or regional government
6	UDSM Scheme	Donation-Based Crowdfunding	Crowdfunding scheme where donors who deposit their donations do not expect any return from the project or activity being financed	Community-based social funds
		Reward-Based Crowdfunding	Crowdfunding scheme in which the party submitting a project proposal provides an offer in the form of a gift or other compensation, which is not a profit sharing from the project to the funding party	Funds from retail investors
		Debt-Based Crowdfunding	Crowdfunding scheme where prospective debtors submit loan proposals and creditors will deposit funds, which are considered loans with returns in the form of interest	Funds from retail creditors
		Equity-Based Crowdfunding	Crowdfunding scheme where investors who deposit funds own shares and are entitled to receive dividends from the company that receives the funds	Funds from retail investors

Source: Various reports from Bappenas, World Bank, Asian Development Bank (ADB), United Nations Development Program (UNDP), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), and Convergence compiled by the author.

2.2. ASSESSMENT OF THE POTENTIAL FOR IMPLEMENTING AFSI FOR THE 2025–2045 RPJPN

This study identifies three main requirements that must be met so that an alternative financing scheme and/or instrument (AFSI) can be used optimally for funding the 2025–2045 RPJPN: (i) comprehensiveness of statutory regulations for implementing AFSI in development financing; (ii) readiness of existing institutions to facilitate the implementation of AFSI in development financing; and (iii) readiness of human resources in implementing AFSI in development financing. These three requirements are used to see the potential application of each AFSI category for financing the 2025–2045 RPJPN.

2.2.1. REGULATORY READINESS

The legal foundation for applying AFSI in development financing exhibits varying levels of readiness across different categories of schemes and instruments. Table 2.2 located at the conclusion of Subchapter 2.2.1. shows several statutory regulations that form the legal basis for using AFSI in the 2025–2045 RPJPN.

At the time of the preparation of this report, no statutory regulation acts as an integrated legal basis for all AFSI categories. In fact, legislation integrating the regulation of various AFSI categories is necessary to facilitate AFSI planning, implementation, monitoring, evaluation, and improvement in national development financing. Ideally, this legal regulation takes the form of a law/legislation (*undang-undang*), which is approved by the House of Representatives (DPR) and the government, so it has a strong legal and political position. In the hierarchy of laws and regulations in Indonesia, legislation is second in position only to the 1945 Constitution.

AFSI initiatives from the government have a more comprehensive legal foundation compared to those not coming from the government. For example, PPP financing schemes, thematic financing instruments in the form of bonds and sukuk, IPUD, and UAND schemes each have statutory regulations as the legal basis for their use in financing the 2025–2045 RPJPN. Meanwhile, although there are statutory regulations regarding DFSK and UDSM, these do not specify the use of the two schemes for development financing.

The following is a discussion of each AFSI scheme and/or category (except for the "other AFSI" category, which currently has not been mapped).

1) **PPP Financing Schemes**

   The PPP financing scheme has a fairly complete set of laws as its legal basis, including Perpres No. 38 of 2015 concerning Government Partnership with Business Entities in Providing Infrastructure and Minister of NDP/Head of Bappenas Regulation (Permen PPN) No. 2 of 2020 concerning Amendments to Permen PPN No. 4 of 2015 concerning Procedures for Implementing Government Partnership with Business Entities in Providing Infrastructure. However, there is a need for additional legal basis for PPP financing schemes that use the blended finance structure because blended financing has not been specifically regulated in Indonesian laws and regulations.

2) **IPAT**

   IPAT in the form of government securities and state sharia securities have a legal basis at the legislative level, namely Law No. 24 of 2002 concerning State Debt Securities and Law No. 19 of 2008 concerning State Sharia Securities, along with its implementing regulations in the form of Minister of Finance Regulation (PMK) No. 125 of 2018 concerning Retail Sales of State Sharia Securities in the Domestic Market and PMK No. 27 of 2020 concerning Sales of Retail Government Debt Securities in the Domestic Primary Market. Further regulations regarding environmentally themed bonds and Sukuk instruments are in Financial Services Authority Regulation (POJK) No. 60/POJK.04/2017 concerning the Issuance and Requirements for Environmentally Friendly Debt Securities (Green Bond), which is the basis for issuing green and blue bonds and/or sukuk. Law No. 24 of 2002 can be used as a basis for issuing other thematic bonds, such as diaspora bonds, social impact bonds (including gender bonds), and other types of state bonds.

   Indonesia already has legislation that will be used to develop alternative financing instruments related to carbon trading and carbon charges. Regulations regarding carbon tax are contained in Law No. 7 of 2021 concerning Harmonization of Tax Regulations. At the implementing regulations level, Presidential Decree No. 98 of 2021 concerning the Implementation of Carbon Economic Value

(NEK) contains regulations regarding carbon trading mechanisms and carbon charges, which can take the form of a carbon tax and non-tax state revenue from levies on carbon emissions.

In line with the increasing campaign for SDGs by the United Nations and campaigns for ESG in the corporate environment at the global level, various new thematic financing instruments continue to emerge. Indonesia needs to create various new laws and regulations to anticipate the development trend of these IPAT so that they can be used to finance the 2025–2045 RPJPN.

3) **DFSK Scheme**

In relation to the DFSK scheme, several laws and regulations provide the legal basis for using these funds for social and humanitarian activities and/or community economic empowerment. For example, Law No. 40 2007 concerning Limited Liability Companies (Social and Environmental Responsibility) regulates the obligation to fulfill limited liability companies' social and environmental responsibilities. This is in addition to Law No. 16 of 2001 concerning Foundations in conjunction with Law No. 28 of 2004 concerning Amendments to Law No. 16 of 2001 concerning Foundations.

Several statutory regulations regulate the management of Islamic religious funds, namely Law No. 23 of 2011 concerning Zakat Management, Law No. 41 of 2004 concerning Waqf, PP No. 42 of 2006 concerning Implementation of Law No. 41 of 2004, and Minister of Religion Regulation No. 4 of 2013 concerning the Secretariat of the Managing Agency and Management of Community Endowment Funds. Currently, no law regulates the management of religious funds for religions other than Islam.

Existing laws and regulations do not specifically direct the use of social and/or religious philanthropy funds to support national development financing. Social and/or religious institutions have independence in managing their respective philanthropic funds so that the government cannot interfere in regulating the management and use of these funds. However, these institutions can still participate in helping support development financing as long as they align with the goals and objectives of their respective philanthropic activities.

4) **IPUD**

IPUD already have statutory regulations that can be used as the legal basis for their use, namely Law No. 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments. In connection with the ratification of this Law, PP No. 30 of 2011 and PP No. 56 of 2018 concerning Regional Loans will soon be replaced by a new government regulation, which is currently being prepared. Specifically for regional bonds, the government has issued PMK No. 111 of 2012 concerning Procedures for Issuance and Accountability of Regional Bonds and PMK No. 180 of 2015 concerning Amendments to PMK No. 111 of 2012 concerning Procedures for Issuing and Accountability for Regional Bonds.

Even though several laws and regulations are a basis for issuing IPUD, few regional governments have utilized these instruments. One of the obstacles faced is the strict requirements set for its use, for example, in the case of regional loan instruments. One of the requirements for regional governments to be able to obtain regional loans, according to PP No. 56 of 2018, is the ratio of regional financial capacity to repay regional loans, which is set at a minimum of 2.5. Not all regional governments in Indonesia can fulfill the requirement. Meanwhile, regional governments face at least two obstacles in issuing regional bonds and/or regional sukuk: (i) the absence of guarantees from the central government for the regional bonds and/or regional sukuk issued; and (ii) the lack of assessment by a rating agency regarding the ability of the regional government to issue regional bonds and/or regional sukuk.

5) **UAND Scheme**
Although the UAND scheme is still not widely implemented because the government has only recently introduced it, this scheme can use several existing legal bases, including (i) Law No. 1 of 2004 concerning State Treasury in conjunction with Law No. 2 of 2020 concerning the Determination of Government Regulation in lieu of Law (Perppu) No. 1 of 2020 concerning State Financial Policy and Financial System Stability for Handling the 2019 Coronavirus Disease (Covid-19) Pandemic and/or in the Context of Facing Threats that Endanger the National Economy and/or Financial System Stability into Law; (ii) PP No. 27 of 2014 concerning Management of State/Regional Property; and (iii) Presidential Decree No. 32 of 2020 concerning Infrastructure Financing Through Limited Management Rights.

6) **UDSM Scheme**
The UDSM scheme is still relatively new, so as of present, not many regulations govern the scheme. Several regulations related to this scheme that have been issued by the OJK as the institution with the authority to regulate financial institutions in Indonesia include POJK No. 57/POJK.04/2020 concerning Securities Offerings Through Information Technology-Based Crowdfunding Services and POJK No. 16 /POJK.04/2021 concerning Amendments to POJK No. 57/POJK.04/2020 concerning Securities Offerings Through Information Technology-Based Crowdfunding Services (Securities Crowdfunding).

Table 2.2 below summarizes the legal bases for using each category of AFSI in the 2025–2045 RPJPN.

TABLE 2.2 LEGAL BASES OF AFSI FOR RPJPN 2025–2045

NO.	ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS	LEGAL BASIS	PRINCIPLES OF REGULATION RELATING TO ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS
1.	PPP	Perpres No. 38 of 2015 concerning Government Partnership with Business Entities in Providing Infrastructure	a. Guidelines regarding types of partnership b. Mechanisms and procedures that must be followed in implementing partnership c. Principles that must be adhered to in partnership between government and business entities d. Procedures for monitoring and evaluating the implementation of partnership
		Permen PPN No. 2 of 2020 concerning Amendments to Permen PPN No. 4 of 2015 concerning Procedures for Implementing Government Partnership with Business Entities in Providing Infrastructure	a. General provisions regarding PPP b. Coverage of infrastructure types open for collaboration in the PPP financing scheme c. Party in charge of the PPP project d. Procedures and stages in the PPP

TABLE 2.2 LEGAL BASES OF AFSI FOR RPJPN 2025–2045			
NO.	ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS	LEGAL BASIS	PRINCIPLES OF REGULATION RELATING TO ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS
		Head of the Government Goods/Services Procurement Policy Agency (LKPP) Regulation No. 29 of 2018 concerning Procedures for Implementing Procurement for Business Entities Implementing Infrastructure Provision Through Government Partnership with Business Entities on the Initiative of Ministers/Heads of Institutions/Heads of Regions	Procedures and stages for procurement of government goods/services in PPP implementation
2.	IPAT	Law No. 24 of 2002 concerning State Debt Securities	Requirements and procedures for issuing government bond (SUN)
		Law No. 19 of 2008 concerning State Sharia Securities	Requirements and procedures for issuing state sharia securities (SBSN), better known as state sukuk
		POJK No. 60/POJK.04/2017 concerning Issuance and Requirements for Environmentally Friendly Debt Securities (Green Bond)	a. Definition and scope of environmentally friendly bonds (green bonds) b. Requirements and procedures for issuing green bonds
		PMK No. 125 of 2018 concerning Sales of Retail State Sharia Securities in the Domestic Market	Requirements and procedures for issuing retail SBSN
		PMK No. 27 of 2020 concerning Sales of Retail Government Bond in the Domestic Primary Market	Requirements and procedures for issuing conventional retail SUN
		Perpres No. 98 of 2021 concerning the Implementation of Carbon Economic Value (NEK)	Regulations regarding carbon charges and carbon trading
		Law No. 7 of 2021 concerning Harmonization of Tax Regulations	a. Imposition of final tax on the income of SUN and SBSN taxpayers b. Regulations regarding carbon tax
3.	DFSK Scheme	Law No. 23 of 2011 concerning Zakat Management	Regulations regarding the management of zakat, infaq, alms, and Islamic religious social funds and the legal basis for the formation of BAZNAS as an institution responsible for and having the authority to collect, distribute, and manage these funds
		Law No. 41 of 2004 concerning Waqf and PP No. 42 of 2006 concerning Implementation of Law No. 41 of 2004	Regulations regarding waqf management and the legal basis for the formation of the BWI to manage waqf in Indonesia

TABLE 2.2 LEGAL BASES OF AFSI FOR RPJPN 2025–2045			
NO.	ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS	LEGAL BASIS	PRINCIPLES OF REGULATION RELATING TO ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS
		Minister of Religion Regulation No. 4 of 2013 concerning the Secretariat of the Managing Agency and Management of Community Endowment Funds	Regulations regarding the management and utilization of Islamic Endowment Funds in Indonesia
		Law No. 40 2007 concerning Limited Liability Companies	Regulations regarding the obligations of limited liability companies to carry out social and environmental responsibilities
		Law No. 16 of 2001 concerning Foundations in conjunction with Law No. 28 of 2004 concerning Amendments to Law No. 16 of 2001 concerning Foundations	Regulations regarding the field of foundation activities in Indonesia, namely in the social, religious, and humanitarian fields
		Perpres No. 111 of 2022 concerning Implementation of the Achievement of Sustainable Development Goals	Philanthropic involvement in innovative funding to achieve SDGs
4.	IPUD	Law No. 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments	Regulations regarding requirements, procedures, and mechanisms for regional debt financing consisting of regional loans, regional bonds, and regional sukuk
		PP No. 56 of 2018 concerning Regional Loans	Regulation regarding requirements, procedures, and mechanisms for the use and accountability of regional loan management. Note: This PP is being replaced by a new government regulation currently being drafted in connection with the issuance of Law No. 1 of 2022
		PMK No. 111 of 2012 concerning Procedures for Issuance and Accountability of Regional Bonds and PMK No. 180 of 2015 concerning Amendments to PMK No. 111 of 2012 concerning Procedures for Issuance and Accountability of Regional Bonds	Regulations regarding the requirements, procedures, and mechanisms for issuing and accountability for the management of regional bonds
5.	UAND Scheme	Law No. 1 of 2004 concerning State Treasury in conjunction with Law No. 2 of 2020 concerning Stipulation of Perppu No. 1 of 2020 concerning State Financial Policy and Financial System Stability for Handling the 2019 Coronavirus Disease (Covid-19) Pandemic and/or in the Context of Facing Threats that Endanger the National Economy and/or Financial System Stability into Law	Legal basis regarding the management of state-owned assets (including state property) and regional-owned assets (including regional property)

TABLE 2.2 LEGAL BASES OF AFSI FOR RPJPN 2025–2045

NO.	ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS	LEGAL BASIS	PRINCIPLES OF REGULATION RELATING TO ALTERNATIVE FINANCING SCHEMES OR INSTRUMENTS
		PP No. 27 of 2014 concerning Management of State/Regional Property	Regulations regarding the management of state property
		Perpres No. 32 of 2020 concerning Infrastructure Financing Through Limited Management Rights	Regulation of infrastructure financing using the management of state-owned assets (including state property)
6.	UDSM Scheme	POJK No. 57/POJK.04/2020 concerning Securities Offerings Through Information Technology-Based Crowdfunding Services	Regulation regarding the use of crowdfunding schemes for offering securities, whether in the form of debt acknowledgment letters, commercial securities, shares, bonds, proof of debt, participation units in collective investment contracts, futures contracts on securities, or any derivatives from securities
		POJK No. 16 /POJK.04/2021 concerning Amendments to POJK No. 57/POJK.04/2020 concerning Securities Offerings Through Information Technology-Based Crowdfunding Services (Securities Crowdfunding)	This POJK amends POJK No. 57/POJK.04/2020 so that requests for permits for private crowdfunding service providers are submitted to the OJK (no longer to the Ministry of Communication and Information)
7.	SIPAL	---	---

Source: State Secretariat

2.2.2. INSTITUTIONAL READINESS

Indonesia is institutionally ready to implement AFSI to finance the 2025–2045 RPJPN. In general, government institutions, private financial and non-financial companies, religious institutions, philanthropic institutions, and the OJK as the main regulator for financial institutions and financial markets in Indonesia will be able to carry out their role in implementing AFSI for financing the 2025–2045 RPJPN. However, institutions and companies that implement and/or are related to the implementation of AFSI must always update their infrastructure and operational procedures because AFSI will continue to develop rapidly. The development of AFSI is also influenced by the trend of digitalization, efforts by various countries to achieve the SDGs, and the growing corporate concern for ESG principles.

The following section will briefly discuss the assessment of institutions and/or companies related to implementing AFSI according to each category of scheme or instrument (except for the "other" category, which is currently not mapped).

1) **PPP Financing Scheme**
   Indonesia has several government institutions related to PPP implementation, including (i) various ministries that technically implement PPP projects (for example, the Ministry of Public Works, Ministry of Transportation, and Ministry of Communication and Information) and regional governments; (ii) the Ministry of Finance, which provides PPP funding support from the government side; (iii) the Ministry of NDP/Bappenas, which coordinates the implementation of PPP from various

ministries and regional governments in implementing national development; (iv) the Government Goods/Services Procurement Policy Institute (LKPP), responsible for the procurement of goods and services by the government in implementing the PPP; and (vi) the Government Financial Audit Agency (BPKP), which carries out internal government control over the implementation of PPP projects. Supervision of the implementation of PPP projects is also carried out by the Financial Audit Agency (BPK) as a state institution that has an equal position to the government.

Various private corporations, encompassing state-owned companies and domestic and foreign private corporations, are actively involved in PPP projects in Indonesia. Non-corporate investors, including social and/religious philanthropic institutions (e.g., the Clean Technology Fund, the Canadian Climate Fund for Private Sector in Asia, and BAZNAS) and multilateral institutions (e.g., World Bank, ADB, and the Islamic Development Bank) are also increasingly showing interest in PPP projects that use a blended finance structure.

2) IPAT

Indonesia already has the regulators, financial institutions, and financial markets needed to develop alternative financing instruments in the form of securities. Many institutions play an important role in securities transaction activities in Indonesia: (i) the OJK as the regulator and supervisor of financial institutions and financial markets; (ii) the Ministry of Finance as issuer of government securities and government sharia securities; (iii) Bank Indonesia as issuer of Bank Indonesia Certificates and Bank Indonesia Sharia Certificates; (iv) PT Bursa Efek Indonesia as organizer of the Indonesian Stock Exchange (which includes the stock exchange and bond market); (vi) PT Kustodian Sentral Efek Indonesia (KSEI), which carries out custodian functions for securities traded on the Indonesian Stock Exchange (BEI); (vii) companies that issue shares and/or securities on the IDX; (viii) investors (both domestic and foreign institutional investors, as well as retail investors); (ix) companies acting as dealers in securities trading; (x) companies that act as intermediaries (brokers) for investors in securities trading; and (xi) associations of financial market players.

Apart from the OJK and these financial institutions, the development of thematic bond and/or sukuk instruments also involves other existing institutions, for example, the Indonesian Ulema Council (in the case of the issuance of green sukuk and blue sukuk), the Ministry of Environment and Forestry (in terms of the issuance of green bonds and green sukuk), the Ministry of Maritime Affairs and Fisheries (in terms of the issuance of blue bonds and blue sukuk), the Ministry of NDP/Bappenas (in terms of planning the use of these instruments for financing national development), multilateral institutions in in terms of providing technical assistance and/or guarantees for issued instruments (for example, ADB, World Bank, and UNDP), and philanthropic institutions (in the case of issuing social bonds).

With regard to non-bond and/or sukuk IPAT (for example, the carbon trading instrument and plastic credit instrument), although Indonesia already has several institutions to develop these instruments (for example, the Ministry of Finance, the Ministry of Environment and Forestry, and the Ministry of NDP/Bappenas), Indonesia will need to establish new institutions to anticipate the rapid development trend of these instruments.

3) DFSK Scheme

Institutionally, Indonesia already has social and/or religious philanthropic institutions in place to develop DFSK schemes as alternative financing instruments for the 2025–2045 RPJPN. Indonesia has long had various social and/or religious philanthropic institutions that take part in social, educational, humanitarian, and economic empowerment activities, for example, the Supersemar Foundation and the Tanoto Foundation (engaged in the education sector), the Tahija Foundation (engaged in the health sector), the Titian Foundation (engaged in the field of microeconomics), the Rumah Energi Foundation (engaged in the field of renewable energy), BAZNAS and BWI (in managing social and religious funds of Muslims), and religious institutions from other religions (for example, the Socio-Economic Development Commission of the Catholic Church, Buddhist Tzu Chi Foundation, and Wahana Visi Indonesia). To optimize the use of DFSK to support financing for the 2025–2045 RPJPN, relevant ministries (for example, the Ministry of Religion, the Ministry of Social Affairs, and the Ministry of NDP/Bappenas) need to facilitate social and/or religious philanthropic institutions in carrying out investment in the public sectors.

4) **IPUD**
Indonesia already has institutions to implement IPUD to fund the 2025–2045 RPJPN. Regional governments (both at the provincial and city/regency levels) can apply for regional loans from the central government, other regional governments, banking institutions (including 27 regional development banks), non-bank financial institutions, and PT Multi Infrastructure Facility (PT SMI). Even though, to date, no regional government has issued regional bonds and/or regional sukuk, Indonesia already has the institutions necessary for the issuance of these securities instruments, including the Ministry of Home Affairs, the Ministry of Finance, and PT Pemeringkat Efek Indonesia (PEFINDO).

5) **UAND Scheme**
Indonesia already has the necessary institutions to implement the UAND scheme in funding the 2025–2045 RPJPN. Basically, all ministries and non-ministerial institutions of the central government and regional governments have assets that can be utilized. The Directorate General of State Assets under the Ministry of Finance can carry out the appraisal function on the value of state and regional government-owned assets that will be utilized. The Financial Audit Agency (BPK), as a state institution, and the Government Financial Audit Agency (BPKP), as the government's internal control agency, are tasked with supervising the implementation of the utilization of state and regional government assets. The central government and regional governments can lease or sell their assets to private parties under the asset recycling scheme or sell EBA to portfolio investors.

6) **UDSM Scheme**
Indonesia already has the institutions needed to implement the UDSM scheme, including (i) the OJK, which carries out its function as a regulator and supervisor of UDSM; (ii) financial technology (fintech) companies that engage in providing crowdfunding services; (iii) investors and/or donors who contribute to crowdfunding schemes; and (iv) the Indonesian Crowdfunding Services Association (ALUDI) as an association of companies providing crowdfunding services in Indonesia. Apart from these institutions, the government, through the Ministry of Finance, Ministry of NDP/Bappenas, and other ministries, can participate in helping develop the UDSM scheme as an alternative financing scheme for implementing the 2025–2045 RPJPN.

2.2.3. HUMAN RESOURCES READINESS

The implementation of AFSI for financing the 2025–2045 RPJPN requires a lot of human resources who understand and are able to carry out work related to financing schemes and/or instruments related to digitalization and/or themes related to SDGs and/or ESG, for example, in carrying out analysis and preparation of AFSI design, management of AFSI use, and monitoring and evaluating AFSI implementation. Indonesia is still facing a shortage in terms of the number and quality of human resources needed to implement AFSI for financing the 2025–2045 RPJPN, both human resources who work in regulatory institutions, the government, and private companies.

Therefore, the government, academic institutions, corporations, and other related parties need to prepare human resources (especially Millennial and Generation Z workers, who are the main actors in the 2025–2045 RPJPN) through education and training related to digitalization, SDGs, and/or ESG.

Based on an assessment of the three requirements related to the readiness to implement AFSI, the following list ranks the seven types of AFSI categories, from those most ready to be implemented to those requiring the most preparation.

1) **PPP Financing Scheme**

   The PPP financing scheme is the scheme that is currently widely used by the government in developing infrastructure projects. The PPP financing scheme is feasible and ready to be used in the 2025–2045 RPJPN because Indonesia already has the legal and institutional tools for using it. However, the government currently faces several obstacles causing the utilization of PPP to be less than optimal: (i) a lack of human resources to carry out various functions on PPP projects in Indonesia; (ii) a quality gap between human resources in Java and outside Java; and (iii) the need to establish legal regulations that specifically regulate the use of the blended finance structure in PPP projects due to confusion regarding the definition and boundaries of this financing structure in the current legal regulations.

   Several things that the government can do to overcome these obstacles to optimize the use of the PPP financing scheme in the 2025–2045 RPJPN include (i) conducting education and training to prepare professional human resources in central government ministries, regional governments, and private business entities to carry out various functions related to the use of PPP financing schemes; (ii) sending human resources from the regional government to receive further training from central government ministries; (iii) sending experts from central government ministries to the regions to provide technical guidance on the implementation of PPP projects in the regions; (iv) establishing a PPP project preparation institution that can take over the preparation process up to financing transactions so as to produce well-standardized preparation quality; and (v) creating laws and regulations that explicitly contain definitions and limitations regarding the financing mix structure in PPPs. Apart from these, the central government can provide various fiscal incentives to regional governments and related private business entities based on performance in implementing the PPP financing scheme (for example, incentives in the form of prize funds and tax reduction incentives).

2) **IPAT**

   IPAT in the form of bonds and sukuk, both issued by the government and private corporations, are feasible and ready to be used in the 2025–2045 RPJPN. Indonesia already has the legal, institutional, and financial market tools to develop IPAT in the form of bonds and sukuk. However, the government must work harder to prepare IPAT other than bonds and sukuk for funding the 2025–2045 RPJPN. This is because the availability of statutory, institutional, and human resource regulations for the instruments is relatively more limited compared to those intended for bond and sukuk instruments.

The government and other stakeholders can take various steps to optimize the use of IPAT in financing the 2025–2045 RPJPN, including (i) conducting education and training to prepare professional human resources in central government ministries, regional governments, and private business entities to carry out various functions related to the use of IPAT; (ii) creating various laws and regulations (especially at the technical implementation level) to support the use of IPAT; and (iii) establishing new institutions (either ad hoc or permanent) to support the use of IPAT. The central government can also provide various fiscal incentives for regional governments and related private business entities based on performance in implementing IPAT for development.

3) DFSK Scheme

Social and/or religious philanthropy funds have great potential to be used as an alternative financing scheme for the 2025–2045 RPJPN, but careful planning and a strong legal basis are needed to integrate them into RPJPN financing. In practice, these funds are also quite ready to be used to support development financing. Because these funds are managed independently by their respective social and/or religious institutions, the government must also aggressively approach the management institutions so that these funds are allowed to be used to finance the 2025–2045 RPJPN.

The government and social and/or religious philanthropic bodies can make various efforts to optimize the utilization of philanthropic funds to finance the 2025–2045 RPJPN, including (i) integrating compatible types of social and/or religious philanthropic funds into planning development financing; and (ii) conducting education and training to prepare professional human resources in government institutions and social and/or religious philanthropic bodies to carry out various functions related to the use of social and/or religious philanthropic funds. The central government can also provide incentives (for example, in the form of tax reduction incentives) for social and/or religious philanthropic institutions that support national development financing through alternative financing schemes.

4) IPUD

The IPUD can be used as an alternative financing instrument for the 2025–2045 RPJPN, but further preparation is still needed, especially in terms of statutory regulations and institutions. Even though there are several laws and regulations as a basis for issuing IPUD, few regional governments already utilize these instruments; one of the reasons is the lack of support offered by existing regulations. For example, not all regional governments can fulfill one of the conditions for obtaining a regional loan: the ratio of the regional financial capacity to repay the regional loan is at least 2.5. Another example is the difficulties regional governments face in issuing regional bonds and/or regional sukuk because there is no guarantee from the central government for their issuance, and there has been no assessment by rating agencies regarding the ability of the regional government to issue these financing instruments.

To prepare for the implementation of IPUD in the 2025–2045 RPJPN, the government can make various efforts, including (i) revising existing laws and regulations to relax the requirements for using IPUD; (ii) conducting education and training to prepare professional human resources in regional governments to carry out various functions related to the use of IPUD; (iii) the need for the central government to consider the possibility of providing collateral for the issuance of regional bonds and regional sukuk; and (iv) the need for PEFINDO to begin assessing and ranking the capabilities of regional governments that plan to issue regional bonds or regional sukuk. In addition to these efforts, the central government can provide fiscal incentives for regional governments that issue regional bonds and regional sukuk.

5) **UAND Scheme**
The UAND scheme can be used as an alternative financing instrument for the 2025–2045 RPJPN. Even though there are several statutory regulations as the legal basis for the use of this scheme, more detailed implementation regulations need to be formulated. Apart from that, ideally, the use of this scheme for development financing should not only be carried out by the central government but also by regional governments. Therefore, it is also necessary to establish a set of statutory regulations that specifically regulate the use of this financing scheme by regional governments.

The central government and regional governments can make various preparation efforts so that the UAND scheme can be used optimally in financing the 2025–2045 RPJPN, including (i) making various statutory regulations (especially at the technical execution level) to support the use of the UAND scheme; (ii) conducting education and training to prepare professional human resources in central government ministries and regional governments to carry out various functions related to the implementation of the UAND scheme. The central government can also provide fiscal incentives to regional governments based on performance in implementing the regional-owned assets utilization scheme.

6) **UDSM Scheme**
The UDSM scheme has the potential to be used as an alternative financing scheme for financing small-scale development projects in the 2025–2045 RPJPN. Although there are already several regulations from the OJK that regulate crowdfunding schemes in Indonesia, additional legal regulations are needed due to the rapid development of innovation in this financing scheme, especially regulations regarding transparency and accountability of institutions providing crowdfunding services as well as protection of the rights of donors and/or investors. In addition, the UDSM scheme is spontaneous and sporadic, so the government needs to integrate and align projects financed by this scheme with existing development plans.

The government and other stakeholders can make various efforts to utilize the UDSM scheme in the 2025–2045 RPJPN, including (i) making various laws and regulations to integrate the UDSM scheme in development financing; and (ii) conducting education and training to prepare professional human resources in government institutions and non-government bodies to carry out various functions related to the use of UDSM schemes. The central government can provide various incentives (for example, in the form of tax breaks) for private business entities that support development financing through the UDSM scheme.

7) **SIPAL**
This study estimates that there will be other types of AFSI by 2045—when the 2025–2045 RPJPN ends—due to the increasingly rapid development of information technology and the deeper and more integrated global financial markets. The government and other stakeholders need to take various steps to prepare legal, institutional, and human resource requirements to anticipate the emergence of various new types of AFSI.

Table 2.3. displays the ranking of various AFSI categories from those most ready to be used to those that still require more preparation for the 2025–2045 RPJPN, various obstacles currently faced by each

category, and concrete steps that can be taken to optimize the procurement and utilization of each AFSI category for the 2025–2045 RPJPN.

TABLE 2.3 RANKING OF VARIOUS AFSI CATEGORIES FOR RPJPN 2025–2045 BASED ON LEVEL OF READINESS, CURRENT CONSTRAINTS, AND RECOMMENDATIONS FOR CONCRETE STEPS TO OPTIMIZE THE USE OF AFSI

(Categorized from the most prepared down to the least prepared)

RANK	INSTRUMENT CATEGORY	CURRENT CONSTRAINTS	RECOMMENDATIONS FOR CONCRETE STEPS TO OPTIMIZE PROCUREMENT AND USE OF AFSI
1.	PPP	• Limited number of professional human resources to carry out various functions on PPP projects in Indonesia • Quality gap between professional human resources in Java and outside Java in carrying out various functions on PPP projects • Confusion regarding the definition and limitations of the blended finance structure for PPPs in the current legal regulations.	• Education and training to prepare professional human resources in central government ministries, regional governments, and private business entities to carry out various functions related to the use of the PPP Financing Scheme • Sending human resources from the regional government to receive further training from central government ministries • Sending experts from central government ministries to the regions to provide technical guidance on the implementation of PPP projects in the regions • Creating statutory regulations that explicitly contain definitions and limitations regarding the blended finance structure in PPP financing schemes
2.	IPAT	• Limited number of professional human resources to carry out various functions related to the implementation of IPAT in development financing • Lack of comprehensive legal regulations (especially at the technical level of implementation) and institutions for IPATs that do not take the form of bonds and sukuk	• Education and training to prepare professional human resources in central government ministries, regional governments, and private business entities to carry out various functions related to the use of IPAT • Creating various laws and regulations (especially at the technical level of implementation) to support the use of IPAT. Establishing new institutions (either ad hoc or permanent) to support the use of IPAT
3.	DFSK Scheme	• Not all uses of DFSK by philanthropic bodies are compatible with development financing needs • Limited number of professional human resources to manage DFSK for development financing	• Integrating compatible types of DFSK schemes into development financing planning • Education and training to prepare professional human resources in government institutions and social and/or religious philanthropic bodies to carry out various functions related to the use of the DFSK scheme

TABLE 2.3 RANKING OF VARIOUS AFSI CATEGORIES FOR RPJPN 2025–2045 BASED ON LEVEL OF READINESS, CURRENT CONSTRAINTS, AND RECOMMENDATIONS FOR CONCRETE STEPS TO OPTIMIZE THE USE OF AFSI

(Categorized from the most prepared down to the least prepared)

RANK	INSTRUMENT CATEGORY	CURRENT CONSTRAINTS	RECOMMENDATIONS FOR CONCRETE STEPS TO OPTIMIZE PROCUREMENT AND USE OF AFSI
4.	IPUD	• Excessively strict requirements in existing laws and regulations that do not support the use of IPUD • Limited number of professional human resources to manage IPUD • Lack of central government guarantee for the issuance of regional bonds and regional sukuk • Lack of assessment by rating agencies regarding the ability of regional governments to issue regional bonds and regional sukuk	• Need to revise existing laws and regulations to relax the requirements for using IPUD • Education and training to prepare professional human resources in regional governments to carry out various functions related to the use of IPUD • Need for the central government to consider the possibility of providing guarantees for the issuance of regional bonds and regional sukuk • Need for PEFINDO to start assessing and ranking the capabilities of regional governments that plan to issue regional bonds or regional sukuk
5.	UAND Scheme	• Insufficient legal regulations (especially at the technical level) to support the use of UAND • Limited number of professional human resources to carry out various functions related to the implementation of UAND	• Creating various laws and regulations (especially at the technical implementation level) to support the implementation of the UAND scheme • Education and training to prepare professional human resources in central government ministries and regional governments to carry out various functions related to the implementation of the UAND scheme
6.	UDSM Scheme	• Insufficient legal regulations to support the use of UDSM • Limited number of professional human resources to carry out various functions related to the implementation of UDSM	• Creating various laws and regulations to integrate the UDSM scheme into development financing • Education and training to prepare professional human resources in government institutions and non-government bodies to carry out various functions related to the use of the UDSM scheme
7.	SIPAL	• SIPAL cannot be identified and mapped at this time because various new types of SIPAL will continue to emerge	• The need for the government, private business entities, and related stakeholders to continue to follow developments in AFSI trends

Source: Author's Analysis

2.3. TYPES OF PROJECTS WITH STRONG POTENTIAL TO BE FINANCED WITH AFSI IN THE 2025–2045 RPJPN

By paying attention to the three main requirements for the optimal use of an AFSI as stated in section 2.2, this study identifies the types of development projects in the 2025–2045 RPJPN that have a strong potential to be financed with alternative financing schemes and/or instruments in Table 2.4 below.

TABLE 2.4 TYPES OF PROJECTS WITH THE POTENTIAL TO BE FINANCED WITH AFSI
(except for the category of schemes and "other alternative financing instruments," which currently has not been mapped)

NO.	AFSI CATEGORY	TYPES OF PROJECTS
1.	PPP Financing Scheme	a. Construction and/or operation of physical transportation infrastructure (e.g., toll roads, goods ports, passenger ports, airports, and railway facilities) b. Construction and/or operation of physical telecommunications infrastructure (e.g., base transceiver station [BTS] tower) c. Construction and/or operation of physical energy infrastructure (e.g., power plants and electricity transmission networks) d. Development of physical health infrastructure (e.g., hospitals, clinics, and health centers) e. Development and/or operation of physical infrastructure for agriculture, plantations, land fisheries, and livestock farming (e.g., reservoirs, irrigation canals, and slaughterhouses) f. Development and/or operation of physical infrastructure in the marine and marine fisheries sector (e.g., fish ports and fish markets) g. Construction and/or operation of trade infrastructure (e.g., markets, shopping centers, and warehousing facilities) h. Construction and/or operation of housing infrastructure (e.g., landed houses, flats, and housing facilities) i. Construction and/or operation of utility and sanitation infrastructure (e.g., drinking water supply facilities and waste processing and recycling facilities)
2.	IPAT	a. Construction and/or operation of renewable energy physical infrastructure (e.g., wind power plants, geothermal power plants, solar power plants, and micro hydropower plants) b. Development and/or operation of physical infrastructure for sustainable agriculture and livestock farming (e.g., rice fields, farms, and livestock farms built and managed by minimizing greenhouse gas emissions and land processing waste) c. Development and/or operation of sustainable physical fisheries infrastructure (e.g., ponds built and managed by regenerating fish and minimizing fish farming waste) d. Construction and/or operation of city utility and sanitation infrastructure financed by the issuance of social bonds (e.g., drinking water supply facilities and waste processing and recycling facilities)
3.	DFSK Scheme	a. Construction of worship facilities b. Construction and/or operation of physical health infrastructure (e.g., hospitals and clinics) c. Construction and/or operation of small-scale physical energy infrastructure (e.g., wind power plants, geothermal power plants, solar power plants, and micro hydropower plants) d. Construction and/or operation of educational, physical infrastructure (e.g., schools, libraries, and reading parks)

TABLE 2.4 TYPES OF PROJECTS WITH THE POTENTIAL TO BE FINANCED WITH AFSI
(except for the category of schemes and "other alternative financing instruments," which currently has not been mapped)

NO.	AFSI CATEGORY	TYPES OF PROJECTS
		e. Financing micro, small, and medium enterprises (MSMEs) and cooperatives for community economic empowerment
4.	IPUD	a. Construction and/or operation of physical transportation infrastructure built by level I or level II regional governments (e.g., toll roads, goods ports, passenger ports, airports, and railway facilities) b. Construction and/or operation of physical telecommunications infrastructure built by level I or level II regional governments (e.g., BTS tower) c. Construction and/or operation of physical energy infrastructure built by level I or level II regional governments (e.g., power plants and electricity transmission networks) d. Development of physical health infrastructure built by level I or level II regional governments (e.g., hospitals, clinics, and health centers) e. Construction and/or operation of physical infrastructure for agriculture, plantations, inland fisheries, and livestock farms built by level I or level II regional governments (e.g., reservoirs, dams, irrigation canals, and slaughterhouses) f. Development and/or operation of physical infrastructure in the marine and marine fisheries sector built by level I or level II regional governments (e.g., fish port and fish market) g. Development and/or operation of trade infrastructure built by level I or level II regional governments (e.g., markets, shopping centers, and warehousing facilities) h. Construction and/or operation of housing infrastructure built by level I or level II regional governments (e.g., landed houses, flats, and housing facilities) i. Construction and/or operation of city utility and sanitation infrastructure built by level I or level II regional governments (e.g., drinking water supply facilities and waste processing and recycling facilities)
5.	UAND Scheme	a. Housing infrastructure construction financed by PT Sarana Multigriya Finansial (PT SMF) (e.g., landed houses, flats, and housing facilities) b. Development of physical transportation infrastructure that can be financed by the Investment Management Institute (INA) (e.g., toll roads, goods ports, passenger ports, airports, and railway facilities) c. Development of physical telecommunications infrastructure that can be financed by the INA (e.g., BTS tower) d. Development of physical energy infrastructure that can be financed by the INA (e.g., power plants and electricity transmission networks)
6.	UDSM Scheme	a. Small-scale health infrastructure development (e.g., a clinic) b. Development of small-scale educational infrastructure (e.g., a small library) c. Construction of a house of worship d. Financing for MSMEs

Source: Author's Analysis

3. INDICATORS FOR MEASURING THE ROLE AND IMPACT OF AFSI

Governments and policymakers can use several types of indicators in planning, monitoring, evaluating, and improving the implementation of the use of various alternative financing schemes and/or instruments in the 2025–2045 RPJPN financing. These indicators can be classified into the following two major groups: (i) the group of indicators measuring the **role** of AFSI in financing the 2025–2045 RPJPN; and (ii) the group of indicators measuring the **impact** of AFSI on the national economy.

3.1. INDICATORS FOR MEASURING THE ROLE OF AFSI IN FINANCING THE 2025–2045 RPJPN

The role of AFSI in financing the 2025–2045 RPJPN can be seen for all AFSI categories or based on each AFSI category. Indicators measuring AFSI's role are expressed as the ratio of the amount of funds collected by AFSI to the nominal GDP or to the total development financing funds in a particular year.

The following indicators measure AFSI's overall role in the national economy and national development financing.

1) The ratio of total funds raised through AFSI to the nominal GDP in a given year (%)

$$\text{Indicator of AFSI role in development financing in year } y = \frac{\text{Amount of total funds raised through AFSI in year } y}{\text{Nominal GDP in year } y}$$

For example:

$$\text{Indicator of AFSI role in development financing in year 2025} = \frac{\text{Amount of total funds raised through AFSI in year 2025}}{\text{Nominal GDP in year 2025}}$$

This indicator measures the overall role of AFSI in financing various activities in the national economy. The higher the value of this indicator, the greater the role of AFSI in the Indonesian economy that year.

2) The ratio of total funds collected through AFSI to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a given year (%)

$$\text{Indicator of AFSI role in development financing in year y} = \frac{\text{Amount of total funds raised through AFSI in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of AFSI role in development financing in year 2025} = \frac{\text{Amount of total funds raised through AFSI in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of AFSI in financing national development that year.

The following are indicators to measure the role of each AFSI category in the national economy and national development financing.

3.1.1. INDICATORS TO MEASURE THE ROLE OF PPP SCHEME IN FINANCING THE 2025–2045 RPJPN

1) The ratio of overall funds raised through PPP to nominal GDP in a particular year (%)

$$\text{Indicator of PPP role in development financing in year y} = \frac{\text{Amount of total funds raised through PPP in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of PPP role in development financing in year 2025} = \frac{\text{Amount of total funds raised through PPP in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of the PPP financing scheme in the Indonesian economy in that year.

2) The ratio of total funds collected through PPP to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a particular year (%)

$$\text{Indicator of PPP role in development financing in year y} = \frac{\text{Amount of total funds raised through PPP in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of PPP role in development financing in year 2025} = \frac{\text{Amount of total funds raised through PPP in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of the PPP financing scheme in financing national development in that year.

3.1.2. INDICATORS TO MEASURE THE ROLE OF IPAT IN FINANCING THE 2025–2045 RPJPN

1) The ratio of overall funds raised through all IPATs to nominal GDP in a particular year (%)

$$\text{Indicator of IPAT role in development financing in year y} = \frac{\text{Amount of total funds raised through IPAT in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of IPAT role in development financing in year 2025} = \frac{\text{Amount of total funds raised through IPAT in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of IPAT in the Indonesian economy that year.

2) The ratio of total funds collected through all IPATs to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a given year (%)

$$\text{Indicator of IPAT role in development financing in year y} = \frac{\text{Amount of total funds raised through IPAT in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of IPAT role in development financing in year 2025} = \frac{\text{Amount of total funds raised through IPAT in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of IPAT in financing national development that year.

3.1.3. INDICATORS TO MEASURE THE ROLE OF DFSK IN FINANCING THE 2025–2045 RPJPN

1) The ratio of overall funds collected through all DFSKs to nominal GDP in a particular year (%)

$$\text{Indicator of DFSK role in development financing in year y} = \frac{\text{Amount of total funds raised through DFSK in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of DFSK role in development financing in year 2025} = \frac{\text{Amount of total funds raised through DFSK in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of DFSK in the Indonesian economy that year.

2) The ratio of overall funds collected through all DFSKs to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a given year (%)

$$\text{Indicator of DFSK role in development financing in year y} = \frac{\text{Amount of total funds raised through DFSK in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of DFSK role in development financing in year 2025} = \frac{\text{Amount of total funds raised through DFSK in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of DFSK in financing national development that year.

3.1.4. INDICATORS TO MEASURE THE ROLE OF IPUD IN FINANCING THE 2025–2045 RPJPN

1) The ratio of overall funds collected through all IPUDs to nominal GDP in a particular year (%)

$$\text{Indicator of IPUD role in development financing in year y} = \frac{\text{Amount of total funds raised through IPUD in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of IPUD role in development financing in year 2025} = \frac{\text{Amount of total funds raised through IPUD in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of IPUD in the Indonesian economy in that year.

2) The ratio of total funds collected through all IPUDs to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a given year (%)

$$\text{Indicator of IPUD role in development financing in year y} = \frac{\text{Amount of total funds raised through IPUD in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of IPUD role in development financing in year 2025} = \frac{\text{Amount of total funds raised through IPUD in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of IPUD in financing national development in that year.

3.1.5. INDICATORS TO MEASURE THE ROLE OF UAND IN FINANCING THE 2025–2045 RPJPN

1) The ratio of overall funds raised through all UAND to nominal GDP in a particular year (%)

$$\text{Indicator of UAND role in development financing in year y} = \frac{\text{Amount of total funds raised through UAND in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of UAND role in development financing in year 2025} = \frac{\text{Amount of total funds raised through UAND in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of the UAND scheme in the Indonesian economy that year.

2) The ratio of overall funds collected through all UAND to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a particular year (%)

$$\text{Indicator of UAND role in development financing in year y} = \frac{\text{Amount of total funds raised through UAND in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of UAND role in development financing in year 2025} = \frac{\text{Amount of total funds raised through UAND in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of the UAND scheme in financing national development that year.

3.1.6. INDICATORS TO MEASURE THE ROLE OF UDSM IN FINANCING THE 2025–2045 RPJPN

1) The ratio of overall funds raised through all UDSM to nominal GDP in a particular year (%)

$$\text{Indicator of UDSM role in development financing in year y} = \frac{\text{Amount of total funds raised through UDSM in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of UDSM role in development financing in year 2025} = \frac{\text{Amount of total funds raised through UDSM in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of the UDSM scheme in the Indonesian economy in that year.

2) The ratio of overall funds collected through all UDSM to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a given year (%)

$$\text{Indicator of UDSM role in development financing in year y} = \frac{\text{Amount of total funds raised through UDSM in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of UDSM role in development financing in year 2025} = \frac{\text{Amount of total funds raised through UDSM in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of the UDSM scheme in financing national development in that year.

3.1.7. INDICATORS TO MEASURE THE ROLE OF SIPAL IN FINANCING THE 2025-2045 RPJPN

1) The ratio of overall funds collected through all SIPALs to nominal GDP in a particular year (%)

$$\text{Indicator of SIPAL role in development financing in year y} = \frac{\text{Amount of total funds raised through SIPAL in year y}}{\text{Nominal GDP in year y}}$$

For example:

$$\text{Indicator of SIPAL role in development financing in year 2025} = \frac{\text{Amount of total funds raised through SIPAL in year 2025}}{\text{Nominal GDP in year 2025}}$$

The higher the value of this indicator, the greater the role of SIPAL in the Indonesian economy that year.

2) The ratio of overall funds collected through all SIPALs to total funds for national development financing (from all conventional and alternative financing instruments and schemes) in a given year (%)

$$\text{Indicator of SIPAL role in development financing in year y} = \frac{\text{Amount of total funds raised through SIPAL in year y}}{\text{Amount of total national development funds in year y}}$$

For example:

$$\text{Indicator of SIPAL role in development financing in year 2025} = \frac{\text{Amount of total funds raised through SIPAL in year 2025}}{\text{Amount of total national development funds in year 2025}}$$

The higher the value of this indicator, the greater the role of SIPAL in financing national development that year.

3.2. INDICATORS FOR MEASURING THE IMPACT OF AFSI ON THE NATIONAL ECONOMY

Several indicators can be used to measure the impact of AFSI (both overall and by category) on the national economy. These indicators are expressed in the form of elasticity, namely the magnitude of changes in a variable in the economy (for example, economic growth or employment) due to the magnitude of changes in the use of AFSI. These elasticity figures cannot be obtained directly from existing statistical data but must be obtained through econometric models or general equilibrium models because various other variables outside AFSI influence economic growth and labor absorption.

Several issues must be considered in forming AFSI impact measurement indicators:

(i) The importance of the availability and ease of access to the data needed for the formation of these indicators

(ii) The importance of conducting prior simulation of the indicators created using current year data to see the feasibility of using these indicators

(iii) The importance of complementing these indicators with assessment parameters to determine whether the impact of a scheme and/or alternative financing instrument is "good," "moderate," or "poor"

The following are two main indicators to measure the impact of using AFSI on economic growth and labor absorption.

1) Elasticity of AFSI impact on economic growth

$$\text{Elasticity of AFSI impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by AFSI}}$$

If this indicator is positive, then the use of AFSI in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of AFSI in financing development projects will reduce the rate of economic growth. This indicator is expected to have a positive value because AFSI is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of AFSI so that it can further encourage economic growth.

2) Elasticity of AFSI impact on labor absorption

$$\text{Elasticity of AFSI impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by AFSI}}$$

If this indicator is positive, then the use of AFSI in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of AFSI in financing development projects will reduce labor absorption in the national economy. This indicator is expected to have a positive value because AFSI is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of AFSI so that it can further encourage labor absorption.

Apart from the two indicators to measure the overall impact of AFSI use on the national economy, various indicators can also be created to measure the impact of each AFSI category on the national economy as follows.

3.2.1. INDICATORS TO MEASURE THE IMPACT OF PPP ON THE NATIONAL ECONOMY

1) Elasticity of PPP impact on economic growth

$$\text{Elasticity of PPP impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by PPP}}$$

If this indicator is positive, then the use of the PPP scheme in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of the PPP scheme to finance development projects will reduce the rate of economic growth. This indicator is expected to be positive because the PPP financing scheme is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of the PPP financing scheme so that it can further encourage economic growth.

2) Elasticity of PPP impact on labor absorption

$$\text{Elasticity of PPP impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by PPP}}$$

If this indicator is positive, then the use of the PPP scheme in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of the PPP scheme to finance development projects will reduce labor absorption in the national economy. This indicator is expected to have a positive value because the PPP financing scheme is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of the PPP financing scheme so that it can further encourage labor absorption.

3.2.2. INDICATORS TO MEASURE THE IMPACT OF IPAT ON THE NATIONAL ECONOMY

1) Elasticity of IPAT impact on economic growth

$$\text{Elasticity of IPAT impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by IPAT}}$$

If this indicator is positive, then the use of IPAT in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of IPAT in financing development projects will reduce the rate of economic growth. This indicator is expected to be positive because IPAT is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of IPAT so that it can further encourage economic growth.

2) Elasticity of IPAT impact on labor absorption

$$\text{Elasticity of IPAT impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by IPAT}}$$

If this indicator is positive, then the use of IPAT in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of IPAT in financing development projects will reduce labor absorption in the national economy. This indicator is expected to have a positive value because IPAT is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of IPAT so that it can further encourage labor absorption.

3.2.3. INDICATORS TO MEASURE THE IMPACT OF DFSK ON THE NATIONAL ECONOMY

1) Elasticity of DFSK impact on economic growth

$$\text{Elasticity of DFSK impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by DFSK}}$$

If this indicator is positive, then the use of DFSK in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of DFSK in financing development projects will reduce the rate of economic growth. This indicator is expected to be positive because DFSK is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of DFSK so that it can further encourage economic growth.

2) Elasticity of DFSK impact on labor absorption

$$\text{Elasticity of DFSK impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by DFSK}}$$

If this indicator is positive, then the use of DFSK in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of DFSK in financing development projects will reduce labor absorption in the national economy. This indicator is expected to have a positive value because DFSK is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of DFSK so that it can further encourage labor absorption.

3.2.4. INDICATORS TO MEASURE THE IMPACT OF IPUD ON THE NATIONAL ECONOMY

1) Elasticity of IPUD impact on economic growth

$$\text{Elasticity of IPUD impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by IPUD}}$$

If this indicator is positive, then the use of IPUD in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of IPUD to finance development projects will reduce the rate of economic growth. This indicator is expected to have a positive value because IPUD is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of IPUD so that it can further encourage economic growth.

2) Elasticity of IPUD impact on labor absorption

$$\text{Elasticity of IPUD impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by IPUD}}$$

If this indicator is positive, then the use of IPUD in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of IPUD to finance development projects will reduce labor absorption in the national economy. This indicator is expected to have a positive value because IPUD is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of IPUD so that it can further encourage labor absorption.

3.2.5. INDICATORS TO MEASURE THE IMPACT OF UAND ON THE NATIONAL ECONOMY

1) Elasticity of UAND impact on economic growth

$$\text{Elasticity of UAND impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by UAND}}$$

If this indicator is positive, then the use of the UAND scheme in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of the UAND scheme to finance development projects will reduce the rate of economic growth. This indicator is expected to be positive because the UAND scheme is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of the UAND scheme so that it can further encourage economic growth.

2) Elasticity of UAND impact on labor absorption

$$\text{Elasticity of UAND impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by UAND}}$$

If this indicator is positive, then the use of the UAND scheme in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of the UAND scheme to finance development projects will reduce labor absorption in the national economy. This indicator is expected to be positive because the UAND scheme is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of this scheme so that it can further encourage labor absorption.

3.2.6. INDICATORS TO MEASURE THE IMPACT OF UDSM ON THE NATIONAL ECONOMY

1) Elasticity of UDSM impact on economic growth

$$\text{Elasticity of UDSM impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by UDSM}}$$

If this indicator is positive, then the use of the UDSM scheme in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of the UDSM scheme to finance development projects will reduce the rate of economic growth. This indicator is expected to be positive because the UDSM scheme is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of the UDSM scheme so that it can further encourage economic growth.

2) Elasticity of UDSM impact on labor absorption

$$\text{Elasticity of UDSM impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by UDSM}}$$

If this indicator is positive, then the use of the UDSM scheme in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of the UDSM scheme to finance development projects will reduce labor absorption in the national economy. This indicator is expected to be positive because the UDSM scheme is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of the UDSM scheme so that it can further encourage labor absorption.

3.2.7. INDICATORS TO MEASURE THE IMPACT OF SIPAL ON THE NATIONAL ECONOMY

1) Elasticity of SIPAL impact on economic growth

$$\text{Elasticity of SIPAL impact on economic growth} = \frac{\text{\% changes of real GDP}}{\text{\% of changes in the total value of development projects funded by SIPAL}}$$

If this indicator is positive, then the use of SIPAL in financing development projects will increase the rate of economic growth. On the other hand, if this indicator is negative, then the use of the SIPAL scheme to finance development projects will reduce the rate of economic growth. This indicator is expected to be positive because SIPAL is used to increase the rate of economic growth and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of SIPAL so that it can further encourage economic growth.

2) Elasticity of SIPAL impact on labor absorption

$$\text{Elasticity of SIPAL impact on labor absorption} = \frac{\text{\% of changes of employed labor force}}{\text{\% of changes in the total value of development projects funded by SIPAL}}$$

If this indicator is positive, then the use of SIPAL in financing development projects will increase labor absorption in the national economy. On the other hand, if this indicator is negative, then the use of SIPAL to finance development projects will reduce labor absorption in the national economy. This indicator is expected to have a positive value because SIPAL is used to increase labor absorption and not reduce it. If this indicator is negative, it is necessary to look for the causal factors and make efforts to improve the use of SIPAL so that it can further encourage labor absorption.

4. CONCLUSIONS, RECOMMENDATIONS, AND LIMITATIONS OF THE STUDY

4.1. CONCLUSION

Indonesia boasts diverse alternative financing sources for funding the 2025–2045 RPJPN. Several types of AFSI have been or are currently being used by the government in various national development projects. These include the PPP financing scheme, green bonds, and green sukuk issued by the government, and regional loans. Additionally, several AFSI are often used by the private sector and other non-governmental parties that support national development, for example, green bonds issued by private corporations, zakat funds used for the economic empowerment of Muslims, and social philanthropy funds issued used for activities in the fields of education and health.

The role of AFSI for financing national development is expected to continue to increase. AFSI is expected to complement national development financing, which currently still relies on conventional financing instruments, such as tax revenues, non-tax state revenues, and government debt. AFSI not only diversifies funding sources but also encourages higher participation from the private sector and other non-government parties in development initiatives.

In general, it can be concluded that Indonesia exhibits readiness to implement various AFSI for funding the 2025–2045 RPJPN in terms of legal and institutional instruments.

4.2. RECOMMENDATIONS

This study provides several recommendations so that AFSI can be implemented more optimally in the 2025–2045 RPJPN:

First, Indonesia needs legal regulations that form the legal basis that integrates regulations for all categories of AFSI to facilitate planning, implementation, supervision, and evaluation of the use of these schemes and instruments in financing national development. Ideally, such a legal regulation is stipulated in the form of a law (UU), which is approved by the House of Representatives and the government so that it has a strong legal and political position.

Second, government institutions and business entities that implement and/or are related to implementing AFSI must always update their infrastructure and operational procedures because AFSI will continue to develop rapidly. The development of ASFI is also influenced by digitalization trends, efforts by various countries to achieve the SDGs, and the growing corporate concern for ESG issues.

Third, Indonesia needs more human resources to carry out various functions related to implementing AFSI in the 2025–2045 RPJPN, for example, analysts, planners, implementers, supervisors, and evaluators. Implementing AFSI for financing the 2025–2045 RPJPN requires many human resources who understand and are able to carry out work associated to schemes and/or financing instruments related to digitalization and/or themes related to SDGs and ESG. The government and other stakeholders need to prepare human resources (especially Millennial and Generation Z workers) through education and training related to digitalization, SDGs, and/or ESG.

Fourth, indicators need to measure the role, impact, and performance of AFSI so that their implementation can be evaluated objectively and improvements can be made to deficiencies. This study has developed various indicators to measure the role and impact of schemes and/or instruments both individually and per category; however, further study is needed to form performance measures for AFSI.

Fifth, the government needs to start compiling a database that integrates all data relating to the use of AFSI in development funding. For example, data on the amount of funds collected from each type and category of AFSI. Until now, the size of potential AFSI funds in Indonesia cannot be determined with certainty because they have not been fully recorded. A complete database will make it easier for the government to plan, use, monitor, evaluate, and improve the use of AFSI in the 2025–2045 RPJPN.

Sixth, providing incentives can accelerate the use of AFSI. This incentive can be given to various ministries, state institutions, regional governments, and business entities involved in financing national development through AFSI.

Specifically, this study recommends several policies related to the implementation of AFSI in the 2025–2045 RPJPN to the Ministry of NDP/Bappenas as follows:

(i) Develop a comprehensive roadmap outlining goals, targets, and timetables for implementing each AFSI category in 2025–2045 RPJPN financing.

(ii) Mapping ministries and agencies of the central government and regional governments and their authorities to prevent overlapping work on similar activities, facilitate coordination, and create synergies in implementing AFSI in financing the 2025–2045 RPJPN.

(iii) Conduct an inventory of ongoing development projects, those in the preparation stage, and those with potential for financing through AFSI, ensuring a clear understanding of the landscape.

(iv) Identifying and mapping active and potential investors for development financing with AFSI based on the economic sector.

(v) Preparing professional staff within the Ministry of NDP/Bappenas in relation to the implementation of AFSI in the 2025–2045 RPJPN.

(vi) Providing support to Statistics Indonesia (BPS) in preparing a centralized funding base related to AFSI.

4.3. STUDY LIMITATIONS

As there is currently no comprehensive database relating to AFSI in Indonesia, this study unable to provide exact figures regarding the current potential value of AFSI, either per category or as a whole. The absence of the required data also precludes the projection of growth trends, comparisons between AFSI and conventional financing for the 2025–2045 RPJPN, or carry out simulations on models to measure the impact of AFSI on economic growth.

The author expresses the hope that the government will take prompt action to establish an AFSI database system. Such system would not only fulfill the requirements of national development planning but also serve as a valuable resource for academic studies in the future.

REFERENCES

Asian Development Bank (ADB). (2008). *Public-Private Partnership Handbook*. Manila: ADB. https://www.adb.org/documents/public-private-partnership-ppp-handbook

Badan Amil Zakat Nasional (BAZNAS). (2023). *Outlook Zakat Indonesia 2023*. Jakarta: BAZNAS. hal. 40. https://www.puskasbaznas.com/publications/books/1737-outlook-zakat-indonesia-2023

International Finance Corporation (IFC). (2023). *Blended Concessional Finance*. Washington, DC: IFC. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/bf

Charities Aid Foundation (CAF). (2022). *World Giving Index 2022: A global view of giving trends.* London: CAF, 2022. https://www.cafonline.org/about-us/publications/2022-publications/caf-world-giving-index-2022

Convergence. (2023). *State of Blended Finance 2022*. Toronto: Convergence. https://www.convergence.finance/resource/state-of-blended-finance-2022/view

Das, U. S., Lu, Y., Mulder, C. & Sy, D. (2009). Setting up a Sovereign Wealth Fund: Some Policy and Operational Considerations. *IMF Working Paper,* No. WP/09/179. https://www.imf.org/external/pubs/ft/wp/2009/wp09179.pdf

Katadata Insight Center. (2022). *Indonesia Carbon Trading Handbook*. Jakarta: Kata Data Insight Center.

Kementerian Negara Perencanaan Pembangunan Nasional / Badan Perencanaan Pembangunan Nasional (Kementerian PPN/Bappenas). (2023). *Public Private Partnership: Infrastructure Project Plans in Indonesia – 2023*. Jakarta: Kementerian PPN/Bappenas. https://perpustakaan.bappenas.go.id/e-library/file_upload/koleksi/migrasi-data-publikasi/file/Unit_Kerja/Direktorat%20Pengembangan%20Pendanaan%20Pembangunan/PPP%20Book%202023.pdf

Ministry of Finance. (2023). Proyek KPBU SPAM Semarang Barat. https://kpbu.kemenkeu.go.id/proyek/detail/18-proyek-kpbu-spam-semarang-barat#pdt_19

Organisation for Economic Co-operation and Development (OECD). (2018). *OECD DAC Blended Finance Principles for Unlocking Commercial Finance for the Sustainable Development Goals.* Paris: OECD. https://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/OECD-Blended-Finance-Principles.pdf

Purwanto, Eko Agus dan Muhammad Bagus Alfian. (2022). *Blended Finance: Antara Manfaat dan Tantangan dalam Penerapannya.* https://kpbu.kemenkeu.go.id/read/1130-1294/umum/kajian-opini-publik/blended-finance-antara-manfaat-dan-tantangan-dalam-penerapannya

Peraturan Kepala Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (LKPP) No. 29 Tahun 2018 tentang Tata Cara Pelaksanaan Pengadaan Badan Usaha Pelaksana Penyediaan Infrastruktur Melalui Kerja Sama Pemerintah dengan Badan Usaha atas Prakarsa Menteri/Kepala Lembaga/Kepala Daerah

Peraturan Menteri Agama No. 4 tahun 2013 tentang Sekretariat Badan Pengelola dan Pengelolaan Dana Abadi Umat

Peraturan Menteri Keuangan No. 111 tahun 2012 tentang Tata Cara Penerbitan dan Pertanggungjawaban Obligasi Daerah

Peraturan Menteri Keuangan No. 180 tahun 2015 tentang Perubahan atas PMK No 111 tahun 2012 tentang Tata Cara Penerbitan dan Pertanggungjawaban Obligasi Daerah

Peraturan Menteri Keuangan No. 125 Tahun 2018 tentang Penjualan Surat Berharga Syariah Negara Ritel di Pasar Domestik

Peraturan Menteri Keuangan No. 27 Tahun 2020 tentang Penjualan Surat Utang Negara Ritel di Pasar Perdana Domestik

Peraturan Menteri Perencanaan Pembangunan Nasional/Kepala Bappenas No. 2 Tahun 2020 tentang Perubahan atas Peraturan Menteri Perencanaan Pembangunan Nasional/Kepala Badan Perencanaan Pembangunan Nasional No. 4 Tahun 2015 Tentang Tata Cara Pelaksanaan Kerja Sama Pemerintah Dengan Badan Usaha Dalam Penyediaan Infrastruktur

Peraturan Otoritas Jasa Keuangan No. 60/POJK.04/2017 tentang Penerbitan dan Persyaratan Efek Bersifat Utang Berwawasan Lingkungan *(Green Bond)*

Peraturan Otoritas Jasa Keuangan No. 57/POJK.04/2020 tentang Penawaran Efek Melalui Layanan urun Dana Berbasis Teknologi Informasi

Peraturan Otoritas Jasa Keuangan No. 16 /POJK.04/2021 tentang Perubahan atas POJK No. 57/POJK.04/2020 tentang Penawaran Efek Melalui Layanan Urun Dana Berbasis Teknologi Informasi *(Securities Crowdfunding)*

Peraturan Pemerintah No. 42 Tahun 2006 tentang Pelaksanaan Undang-Undang No. 41 Tahun 2004 tentang Wakaf

Peraturan Pemerintah No. 27 tahun 2014 tentang Pengelolaan Barang Milik Negara/Daerah

Peraturan Pemerintah No. 56 Tahun 2018 tentang Pinjaman Daerah

Peraturan Presiden No. 38 Tahun 2015 tentang Kerja Sama Pemerintah dengan Badan Usaha dalam Penyediaan Infrastruktur

Peraturan Presiden No. 32 tahun 2020 tentang Pembiayaan Infrastruktur Melalui Hak Pengelolaan Terbatas

Peraturan Presiden No. 98 Tahun 2021 mengenai Penyelenggaraan Nilai Ekonomi Karbon (NEK)

Peraturan Presiden No. 111 Tahun 2022 tentang Pelaksanaan Pencapaian Tujuan Pembangunan Berkelanjutan

Undang-Undang No. 16 Tahun 2001 tentang Yayasan

Undang-undang No. 24 Tahun 2002 tentang Surat Utang Negara

Undang-Undang No. 1 Tahun 2004 tentang Perbendaharaan Negara

Undang-Undang No. 28 Tahun 2004 tentang Perubahan atas Undang-Undang No. 16 Tahun 2001 tentang Yayasan

Undang-Undang No. 41 Tahun 2004 tentang Wakaf

Undang-Undang No. 40 Tahun 2007 tentang Perseroan Terbatas

Undang-Undang No. 19 Tahun 2008 tentang Surat Berharga Syariah Negara

Undang-Undang No. 23 tahun 2011 tentang Pengelolaan Zakat

Undang-Undang No. 2 Tahun 2020 tentang Penetapan Peraturan Pemerintah Pengganti Undang-Undang No. 1 Tahun 2020 tentang Kebijakan Keuangan Negara dan Stabilitas Sistem Keuangan untuk Penanganan Pandemi Corona Virus Disease 2019 (Covid-19) dan/atau Dalam Rangka Menghadapi Ancaman yang Membahayakan Perekonomian Nasional dan/atau Stabilitas Sistem Keuangan Menjadi Undang-Undang

Undang-Undang No. 7 Tahun 2021 mengenai Harmonisasi Peraturan Perpajakan

Undang-Undang No. 1 Tahun 2022 tentang Hubungan Keuangan antara Pemerintah Pusat dan Pemerintah Daerah

Undang-Undang No. 6 Tahun 2023 tentang Penetapan Peraturan Pemerintah Pengganti Undang-Undang No. 2 Tahun 2022 tentang Cipta Kerja

United Nations Industrial Development Organization (UNIDO). (2017). *Circular Economy*. Vienna: UNIDO. https://www.unido.org/sites/default/files/2017-07/Circular_Economy_UNIDO_0.pdf

United States Agency for International Development (USAID). (2023). *Mobilizing Investment for Development with Catalytic Funding.* Washington, DC: USAID. https://www.usaid.gov/sites/default/files/2023-03/Catalytic%20Funding%20Learning%20Brief_Final%20%281%29.pdf