Part I

Resources Mobilisation, Financing Options, and PPP Direction for ASEAN Member States

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Overview of Potential Resources Available for ASEAN

1.1.Potential Resources

ASEAN countries have access to a range of international, regional and domestic potential sources of finance for infrastructure projects. Infrastructure as an asset class possesses a number of distinguishing characteristics that require a special approach to get financing. In general, infrastructure financing has following characteristics:

- Investment is capital intensive with high sunk-costs
- Investment is highly leveraged
- Dominated by greenfield projects
- Capital investment is long-term
- Revenue streams are stable and generally indexed to inflation
- Debt servicing obligations are matched to project cash flows
- Lender security is generally limited to the bundle of contracts that make up the investment agreement
- Output has low price elasticity
- The relationship between the parties is usually regulated by contract.

Project finance transactions have always spanned a wide variety of financial products and services offered by a number of public and private investors.

What investments have in common is the wide use of long-term limited recourse loans or bonds amounting to around 75-85% of total capital requirement. Project finance also requires complex documentation, which attracts high transaction costs. For projects over USD100 million, debt may be syndicated over a number of financial institutions and structured in several trenches denominated in different currencies, interest rates, maturities and security rankings (in the event of the winding-up of the debtor entity). Infrastructure finance also requires the services of financial intermediaries and advisers, underwriters, sovereign and political risk insurers and credit enhancement.

Infrastructure finance for loans less than USD 100 million generally requires the same level of documentation as larger transactions but lacks the economies of scale, which increases transaction costs as a percentage of total project costs.

The institutional framework required to support local capital market capacity for infrastructure finance is significant, and a considerable challenge for nations with domestic capital markets in the early stages of development.

Shorter-term corporate finance (terms of up to 7 years) may be used for infrastructure finance but is not an optimal solution, mainly because of the potential mismatches between debt servicing requirements and the cash flows of the investment. The risks for borrowers include the need for frequent refinancing, uncertainty relating to transaction costs, the availability and cost of debt at the time the refinancing takes place, and corporate debt providers' preference for full recourse security and early loan principal reduction.

Bond financing is also an option because of the flexibility it offers to structure a mix of maturities, currencies and interest rates matched to the cash flows of the asset being financed. As a partial securitisation of project cash flows, bonds may also be traded in official capital markets or privately, thereby satisfying the liquidity requirement of portfolio bond investors. Bonds also attract a wider group of investors that may include domestic and international financial and non-financial institutions, pension funds, insurance companies and investment trusts. The bonds gain wider market acceptance, particularly by investment trusts, if they are rated 'investment grade' by a credit rating agency.

Infrastructure bonds issued for PPP projects in Australia, Britain and Canada have met steady demand from institutional investors, pension and sovereign wealth funds keen to secure portfolio diversification and match their long-dated liabilities with assets of similar tenor. This institutional appetite for infrastructure bonds occurs at a time when traditional bank lenders are reducing their participation in project finance syndications in response to the new Basel III capital adequacy requirements.

Recent developments in the international economy have also had a significant impact on the availability of infrastructure finance. The re-pricing of risk, the demise of the monoline[1] credit insurance market and low securitisation activity has reduced the attraction of unitised infrastructure debt to institutional investors. The main sources of future equity and debt investment are the international pension funds seeking to diversity their assets by asset class and regional distribution. Bilateral and multilateral development agencies also occupy a central role with grant assistance, cross-border and regional program initiatives, political risk insurance, capacity building, and advisory and supporting financial services to assist the financing of PPP projects within ASEAN.

1.1.1. Domestic

The significant resources needed to meet the infrastructure gap in ASEAN countries cannot be met by member countries alone (ADB, 2011). Domestic capital markets provide limited opportunities to source project finance for infrastructure projects although domestic capital markets in East Asia have experienced significant development in the past decade. The strongest growth has been in corporate bond markets which stood at USD2.8 trillion in 2012 and around 24% of GDP (from USD510 billion and 16% of GDP in 2000). The largest ASEAN markets for corporate bond issues in March 2013 were Malaysia, Singapore, and Thailand. Corporate bond markets have a number of important economic functions. For investors, they offer portfolio diversification and long-term fixed interest returns. For issuers, they enable firms to better match assets and liabilities, reduce refinancing risk, generally lower the cost of capital and limit exposure to foreign exchange risk (Hack

[1] A business that focuses on operating in one specific financial area

and Close, 2013). Significant progress has also been made in market infrastructure with market regulators strengthening financial stability and encouraging wider use of domestic currency issues since the financial crises of 2007- 08.

Corporate bonds may be secured on the assets of the company or issued as unsecured notes, which are generally short-term securities offered at a higher rate of interest. Two difficulties with corporate bonds are the mismatch between maturities of 10-12 years and the 20-30 year terms of PPP contracts, and the impact of secured long-term bond issues on corporate balance sheets. Nevertheless, the maturity and growth in East Asian bond markets provide opportunities for new methods of infrastructure and PPP finance that will be developed in response to the changes in global finance architecture and regulation following the crises of 2007-08.

Among ASEAN member states, Malaysia, Indonesia, Singapore and Thailand meet the criteria of mature capital markets but originate only minor levels of infrastructure finance (Izaguirre and Kulkarni, 2011). Disadvantages of domestically sourced infrastructure finance at the present time include lowering sovereign credit ratings and differences between international and domestic interest rate settings. In July 2013, the nominal 90 day London Interbank Offer Rate (LIBOR) is trading at a significant discount to domestic interest rates in ASEAN countries, and the prospect of a short-term tightening of monetary policy in Thailand, Malaysia and the Philippines is likely to increase the difference in the short term.

Other sources of finance offered in domestic markets include short to medium-term corporate or term bank finance and plant leasing. In developing countries around 65% of infrastructure finance is provided by the private sector and in East Asia, the level is around 85% (Izaguirre and Kulkarni, 2011).

Domestic capital markets play an important role in developing and transition economies by facilitating local firm participation in bids, increasing the depth and variety of bid markets and reducing bid costs.

Five countries within ASEAN share the common characteristics of a mature capital market: Indonesia, Malaysia, the Philippines, Singapore and Thailand. The characteristics of a capital market for these purposes may include all or most of the following:

- A regulated banking sector with central bank oversight
- Public and private ownership of financial institutions
- Local currency bond issues in domestic and regional capital markets
- Services that include project and conventional corporate finance
- The capacity to underwrite debt and particularly bond issues
- Foreign exchange and interest rate hedging facilities, and financial intermediation services for syndicated debt with domestic and foreign financial institutions.

Mature capital markets are competitive and participating in a local or regional securities exchange for equity and bond trading.

The capacity of the domestic banking sector to provide infrastructure finance may also be affected by the level of domestic savings, macroeconomic policies, monetary policy, particularly interest rates, currency and exchange rate management, and policies on trade and foreign direct investment. The contribution of capital market development to economic progress assumes greater importance with efficiency-driven economies such as Indonesia, Malaysia, Thailand, the Philippines and Brunei (World Economic Forum, 2012).

The rest of ASEAN countries (Brunei, Cambodia, Lao PDR, Myanmar, Viet Nam) have capital markets in transition and are more reliant on foreign-sourced debt, mezzanine and equity capital and financial services. This group of countries will take longer time to develop the depth and diversity of financial services needed for sustained capital market development. Viet Nam participates in the Asian Bond Markets Initiative (ABM I) although its bond maturities are short to medium term. Brunei Darussalam has less need for a domestic capital market with no state debt and limited formal market demand for financial services.

1.1.2. Intra-ASEAN

There are advantages in greater connectivity between the capital markets in ASEAN member nations. Research points to the advantages of greater integration within ASEAN capital markets (Kusari and Sanusi, 2012) and evidence of co-movement of short-term domestic interest rates between

ASEAN+5 member countries (Mohan and Nandwa, 2009). Indonesia, Malaysia, Singapore and Thailand have the capacity to foster a specialist infrastructure finance capability and create specialist financial products such as indexed annuities and tax-preferred bonds to raise capital for infrastructure. There has, however, been little interest to date in intra-ASEAN project lending or contributions to pooled investment vehicles.

An important innovation has been the creation of the ASEAN Infrastructure Fund (AIF) in 2011 to provide additional financing for improved infrastructure and support wider use of the PPP procurement model within ASEAN. Because AIF is newly established and acting as a co-financier to ADB's selected projects, its role is still limited. Further initiatives should also be considered including the European Investment Bank's mezzanine finance pilot program, which offers credit enhancement to senior debt providers at relatively small risk for the sponsoring institution (EIB, 2012). To develop regional infrastructure financial market, the region does not only need the investors and borrowers, but also the complementary institutions, such as reinsurance companies, rating agencies, etc. The Asian Infrastructure Fund, the Asian Bond Market and Asian Bond Market Initiative are examined in further detail below.

In recent years, the majority of ASEAN infrastructure finance has been sourced internationally from private investors and lenders. Dependence on international sourced of finance has, however, exposed ASEAN member nations to the instability and uncertainties of global financial markets.

1.1.3. Extra-ASEAN

As noted, international capital markets have provided most infrastructure finance within ASEAN in recent decades. The greatest share of this has taken the form of traditional project finance, term debt and, to a much lesser extent, mezzanine bonds issued by private firms. However, the total requirement of USD13.5 billion in 2012 accounted for only 16% of that provided to the Asia Pacific region (excluding Japan) (Austrade, 2013). Other providers of finance include institutional investors and pension funds, export credit agencies, and multilateral and bilateral development agencies. In 2011-12, most ASEAN investment went to the energy and transport sectors, primarily sourced in Japan and Europe (PricewaterhouseCoopers, 2012). However, the new capital adequacy requirement for banks under

Basel III contributed to the 13% decline in international project finance flows in 2011-12, a trend that began during the global recession of 2007-08 (Eurofi, 2012).

1.2. Integration with Asian Bond Markets Initiative

ASEAN has progressively created a framework for closer capital market integration since 2000 to develop the infrastructure needed for cross-border collaboration between the various capital markets in ASEAN. The objective of the initiative was to achieve greater liberalisation and harmonisation of member capital markets and to facilitate the issue of long-term, local currency-denominated debt to improve the competitiveness of ASEAN capital markets in a wider regional and global context (ERIA, 2012). Two recent initiatives in the past decade designed to develop ASEAN market depth are the Asia Bond Fund (ABF) and the Asian Bond Market Initiative (ABMI).

The ABF was created in 2003 as an initiative of the Bank for International Settlements (BIS) to foster regional cooperation, promote intra-regional investment and capital market development. The fund had an initial focus on the demand side and sought to establish diversity, depth and benchmark maturities for investors. This was followed by a second fund, ABF 2 in 2005 with a subscription of around USD2 billion. and both funds invest in eight local currency bond markets. The funds are managed by the BIS and had an initial capital of US1 billion. The ABF has achieved its early objectives including withholding tax reforms, the liberalisation of foreign exchange rules and reduction in cross-border settlement risk. Nevertheless, challenges remain including improvement in both debt and liquidity with the development of repo markets, the adoption of derivatives trading and opening the market to non-resident investors (Bank for International Settlements, 2011).

The ABM I was introduced in 2005 by ASEAN+3 with the support of the Asian Development Bank to create a market to harness the region's strong domestic savings, facilitate investment in local enterprises and help manage regional currency and tenor issues. There are eight index funds trading in the market including Indonesia, Malaysia, the Philippines, Thailand, Singapore and Viet Nam. In March 2013, outstanding Local Currency (LCY) bonds stood at USD6,600 billion of which around 36% were non-government securities, an increase from 29% in 2007. The ABMI in its early years adopted a supply side perspective with the objective of improving depth and diversification of offers. The market doubled in size between 2007 and 2013. There is wide variation in maturities and yields between the funds and a summary of recent performance indicators (yields, tenors and short-term domestic interest rates) is set out at Table I.1. The value of non-government bonds with maturities of 5 years or longer account for around half the bonds on issue in Malaysia, the Philippines, Singapore and Thailand. The Viet Nam fund has no private bonds with a maturity of 10 years or longer although around 47% have maturities of 5 to 10 years (ADB, 2007) .

Table I.1. Asian Bond Market Initiative

	Domestic Interest Rates %[a]	Yield % 10 Yr Govt Bonds[b]	Average Fund Tenors %				Private Bonds % >10 Yrs
			1-3 Yrs	3-5 Yrs	5-10 Yrs	>10 Yrs	
Indonesia	6.50	7.58	34	40	26	0	0
Malaysia	3.00	3.96	17	15	36	32	33
Philippines	3.50	3.43	21	22	54	3	2
Singapore	0.03	2.23	20	21	38	21	21
Thailand	2.50	3.90	33	20	38	9	9

Note :[a] Short-term rate June 2013
[b] ABMI Market Watch August 2013
Source: ADB ABMI Monitor (August 2013)

Recent ABMI initiatives include a credit guarantee and investment facility established in 2010 to provide credit enhancement for corporate bonds denominated in local currency which has improved access for qualifying investment grade infrastructure bonds (Kurihara, 2012). The future development of the ABM I market includes a strategy to increase the volume of infrastructure securities in future years which will offer several advantages unavailable with foreign-sourced project finance, including better diversification of project risk and investor liquidity. Asian bond funds face several challenges. For non-government bonds, market makers believe that liquidity could be improved with greater transparency, investor diversity and foreign exchange regulations, better market access and transaction funding (ADB 2013).

1.3.Utilisation of Financial Resources

Most finance for projects in ASEAN is sourced from foreign jurisdictions, and the use of domestic and intra-ASEAN financial resources is relatively low. The region accounts for around 29% of the Asia Pacific's infrastructure investment requirement but receives only 16% of private infrastructure investment (Austrade, 2013). With the exception of Malaysia and Singapore, ASEAN companies have not made wide use of long-dated bonds. Closer integration of ASEAN capital markets and a decline in project finance investment flows from bank lenders may see a change in this position in future years.

1.3.1. Key Factors

The key factors contributing to greater resource utilisation in ASEAN include the following:

- The staged integration of ASEAN capital markets, particularly with the liberalisation and homogenisation of market regulations
- Greater focus on long-term investment horizons, particularly on the supply side of the market
- Wider use of non-government bond issues in various configurations of interest rate, maturity and currency
- The adoption of common infrastructure procurement policy principles with a view to improving investor and market acceptance of securitised infrastructure debt
- Communications — ASEAN economies have a good story to tell global investors and with the change in infrastructure finance supply moving away from traditional banking sources to portfolio institutional investors and pension funds the opportunity exists for the region to promote itself more widely to this community
- The introduction of a mezzanine finance support mechanism to enhance the credit standing of private bond issues as explained in greater detail below.

The obstacles to greater resource utilisation for infrastructure projects include:

- Poor risk allocation practices that give effect to wholesale rather than optimal risk allocation in infrastructure projects. The allocation of project risk to the bidding consortium that it is in the position to best manage implies that it will do so at lowest cost. Optimal risk transfer reduces the average cost of capital for consortia and minimises the risk of project failure

- The adoption of common principles for infrastructure projects that require the life cycle costing of the investment and risk weighting of the procurement options. The benchmarking of these two key performance indictors improves the “bankability” of infrastructure transactions.

The European Investment Bank (EIB) Mezzanine Bond Facility

The European Investment Bank introduced a pilot program for a new credit support facility designed to enhance the credit standing of PPP transactions and attract senior debt providers back to this asset class. The EIB Fund offers either a loan or guarantee of the mezzanine or subordinated debt component of project finance. The EIB engages with the bid market prior to lodgement of bids and works with bidding consortia to structure a mezzanine facility on a case-by-case basis, which is supported by the EIB’s strong credit rating. Senior lenders are assured by the certainty of repayment of the mezzanine facility, which is in a subordinated security position and first to be called in the event of project or consortium failure. Mezzanine finance typically accounts for 15-20% of PPP project debt and the mezzanine finance/guarantee effectively enhances the overall credit standing of the transaction. For its pilot program, the EIB has placed mezzanine finance limits to its participation and eligible projects are limited to a small number of industries.

The EIB initiative comes at relatively small impact to the EIB balance sheet and is a lower cost option to state institutions than guarantees of a project’s revenue, forward pricing of services and senior debt (Regan 2009). The lessons learnt from this pilot program will provide a blueprint for advancing credit support for PPP infrastructure projects at relatively low state risk and may play an important role within ASEAN in boosting the resources available to infrastructure finance.

Institutional Setting

Institutions are important to foreign investors and financiers who need the certainty of property rights, stable economic policies, freedom to repatriate dividends and interest, sound governance, favourable foreign ownership policies, recognition and enforcement of contracts, and speedy access to an independent judiciary or alternative dispute resolution mechanisms to resolve disputes. Evidence suggests that institutional effectiveness in countries is correlated with the rate of economic and social development.

The relationship is strongest in those economies with factor-driven economies or economies in transition from a factor to an efficiency-driven economic structure (Regan, Smith, and Love, 2013). Myanmar, Lao PDR, Viet Nam and Cambodia are designated as factor-driven economies, while Indonesia, Malaysia and Thailand are efficiency-driven. The Philippines is in transition between the two stages (World Economic Forum, 2012).

2.1.Institutions Dealing With Foreign Financing

A survey of institutional management of foreign finance for PPP projects within ASEAN indicates that Treasury and Finance agencies will provide approval and in some cases, oversight of foreign-sourced PPP finance. External finance has several implications for national governments, including private debt aggregates, the assumption of contingent liabilities in the form of guarantees, externalities, early exercise of step-in rights and direct or indirect debt participation in the project.

In some jurisdictions such as Lao PDR and Myanmar, negotiations with PPP contractors and their financiers is undertaken by line agencies, such as the Department of Mines and Energy with oversight by the Department of Planning and Investment. One important thing is the incorporation of estimated potential future fiscal liabilities into national budget system over similar horizon; unfortunately, these two usually are detached in many emerging economies.

2.2.Types of Foreign Finance

The following five methods are the most commonly used to finance privately managed infrastructure in the Asia Pacific area, although practices may vary between regions:

- Conventional limited recourse medium and long-term project finance
- Medium-term corporate debt that is refinanced at intervals of 7 to 10 years. Refinancing of robust economic infrastructure projects offers equity investors the opportunity of equity gains and higher debt levels against increases in asset values, which reduces the overall cost of capital for the project. However, regular refinancing introduces the risk that debt may be difficult to raise and interest rates will be higher at the time of refinancing
- The issue of long-term senior bonds, medium term subordinated bonds and mezzanine bonds of various maturities on capital markets or by private distribution
- Provision of full or partial project debt by state development banks and lending institutions
- The listing of all or part of the equity of the consortium investment vehicle on a securities exchange and the financing of debt using corporate or project finance at lower debt to equity levels than conventional project finance.

The credit enhancement and financial risk management instruments available to support infrastructure finance and disperse financial risk include sovereign/political risk insurance, currency and interest rate hedging facilities, the guarantee of forward supply or off-take agreements with buyers, and traded derivatives to limit output price volatility.

2.3.Sample Procedures for Foreign Finance Approval and Management

Recent surveys of ASEAN member nations indicate that as a general rule, infrastructure projects are nominated by line agencies subject to the oversight and approval of central agencies of government (Sugiyana and Zen (eds), forthcoming, and Zen (ed.), forthcoming). In Lao PDR for example, hydro energy projects are negotiated by the Ministry of Energy and Mines in conjunction with the Ministry of Planning and Investment and approval for the financing arrangement will be the Ministry and, for major projects, a formal meeting of the executive. In Thailand, the project is negotiated by the line agency in conjunction with the Ministry of Finance. Cabinet gives final approval for foreign sourced finance.

In nearly all jurisdictions examined, with the exception of Lao PDR, the

Ministry of Treasury and Finance plays a central role in the finalisation of project financing agreements and delegates detailed contractual negotiations to the line agency. Ultimately, the Ministry will sign off on the transaction before it is presented to the cabinet for final approval. A similar approach is adopted in other Asia Pacific countries with limited exceptions.

2.4.Managing Contingent Liability

Contingent liabilities arising from government exposures to PPP contracts include guarantees of revenue, private debt obligations, provision of loans, indemnities, the execution of step-in rights, a contractor's unilateral withdrawal from the contract or the loss or destruction of assets. Events that affect the performance, cash flows and the financial position of a public entity are provisioned in the entity's financial accounts (IPSASB, 2013). International public sector standards for government financial reporting are published by the International Public Sector Accounting Standards Board (IPSAS). Full compliance is observed in Malaysia, the Philippines, and Singapore and adoption is progressing in Cambodia, Indonesia, Lao PDR and Viet Nam. ASEAN members not fully compliant at the present time include Brunei Darussalam, Myanmar, and Thailand.

Standard 19 contains disclosure requirements for reporting provisions, contingent liabilities and contingent assets. Governments are required to make provision and provide information about non-remote contingent liabilities at the reporting date (paras. 35-38; 100). The recognition of the liability uses a probability test adjusted for reimbursements or indemnities from other parties, and may be valued using discounted cash flow methodology. The practical effect for government compliance with IPSA 19 is that potential liabilities arising at a future time will need to be recognised in government accounts. The provision may not apply to contracts entered into by government business enterprises.

Standard 32, released in October 2011, provides for recognition of service concession arrangements for public sector entities employing the accrual basis of accounting. The standard applies to existing and new assets constructed by concessionaires under a "right to control" test. The standard does not apply to government business enterprises. A grantor agency must account for the concession and associated assets in its balance sheet as a non-current asset and capitalise future payments due under the arrangement to the contractor as a contingent liability.

Reporting of contingent liabilities is an important step in achieving greater transparency for long-term contracts for private provision of infrastructure services. Adoption and compliance with IPSAS standards is a matter taken into account by international credit rating agencies in their assessment of sovereign risk.

Indonesia's Case

Indonesia has several ways to manage her fiscal risks associated with the contingent liabilities of infrastructure projects. First is the establishment of a guarantee company called PT. Penjaminan Infrastruktur Indonesia (Indonesia Infrastructure Guarantee Funds = IIGF) into which the government injects the capital. The company is responsible for assessing and providing guarantees for the PPP projects that need it. This mechanism reduces the government's exposure to the contingent risks, since the IIGF is the only guarantor. The government's second means of managing fiscal risks is by putting aside certain funds as fiscal risk reserve in the national budget annually. This posting is a reservation in case some infrastructure projects need to be backed up financially. However, both reservations are planned ones, meaning that the amount of funds is determined by government plan or by an ad hoc decision to estimate the coming year's obligation. So far the estimations of contingent liabilities have been simulated by the Ministry of Finance (MOF) but not monetised and fully reflected in the National budget.

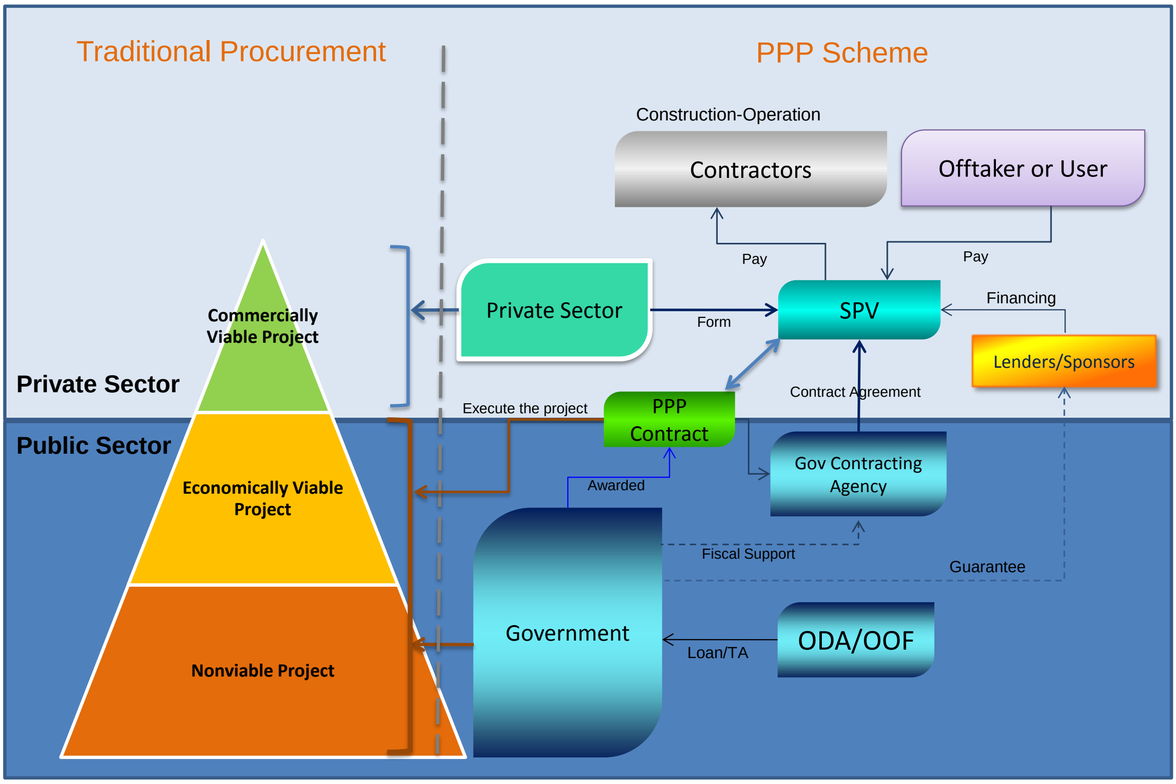
In FYs 2012 and 2013, apart from contingency funds for PLN (National Power Company) and PDAM (Regional Water Companies), the government did not allocate any other contingency funds. In infrastructure posts budgeted outside line ministries, there were some 20 posts allocated including land capping, pre-FS for PPP, VGF, capital injection for IIGF and SMI (a supporting company owned by the government to facilitate PPP implementation), and loan to PLN. Actually there is a budget post for Infrastructure Budget Reserve but, as mentioned earlier, the government has not allocated money for this post. In short, even though the government has been incorporating short-term liabilities, including contingent liabilities, in the long-term they have not been incorporated in fiscal policy. An unclear estimation of the long-term fiscal risks of projects may hamper the government from taking the decision to guarantee projects, if the government is risk averse, but can have the reverse effect when the government is risk-insensitive or short-sighted.

Financing Mechanism of a Selected MPAC Project: Example of Route AH-13

This part of the paper is not intended to provide a solution for the project described below; it requires a detailed study and additional effort to generate an in-depth analysis of the project situation, technical requirements and costs, and thus proposals for financing schemes. What this section provides is the preliminary assessment of the project's situation based on available data and information. On that basis some feasible financing schemes can be discussed which later can be used as starting points to elaborate their details. The illustrations of financing schemes are also simplified in order to maintain generality.

As an illustration, the following diagram summarises the types and relationship of traditional procurement and PPP. Traditional procurement typically recognises two types of system, i.e.: public or private procurements. When the projects are attractive for the private sector that usually does not contain market failure, government usually lets the market work. Among examples are IT or power distribution projects that achieve economies of scale. Unfortunately, typical infrastructure projects usually fall into nonviable or non-commercially viable categories. With limited available public funds, direct fully funded finance is usually constrained, hence government will need to find additional finance, including borrowing and grants. PPP offers additional schemes that can bring private and public sectors together to finance non-commercially viable projects.

Figure I.1. Financing Infrastructure



Master Plan of ASEAN Connectivity has stated six prioritised projects for ASEAN Connectivity within the context of physical connectivity. Perhaps the most challenging project is completion of the ASEAN Highway Network (AHN) missing links and upgrades of the Transit Transport Routes (TTR). There are some routes that are not yet completed or where work has yet to start. We take as an example of such a project, whose status is "Need Funding"[2], Route AH-13 (NR2): Muang Ngeun Oudomxay-Taichang (Lao-Vietnamese border) with a total length of 202 km.

On the Lao side of the border, the route is part of an international road connecting Muang Ngeun in Oudom Xay state (near the Thai border) to Taichang in Phongsaly state near border with Viet Nam. As a landlocked country, Lao's international connections rely on land and air links, and on open access to seaports in neighbouring countries.

Phongsaly province, inhabited by 179,600 people[3], is located in the remote northern mountainous region of Lao PDR and has very poor infrastructure.

[2] ASEAN Connectivity Projects Information Sheets, as of August 2013.

[3] http://www.fao.org/docrep/009/ag106e/ag106e08.htm accessed in October 2013

Three most important facilities—roads, healthcare, and education,—are often not available in or accessible to many villages. Phongsaly province is also one of the poorest in Lao PDR, with three out of seven districts classified as poor. The region has suffered from the absence of a rice-supply for more than half of each year.

The United Nations Office on Drugs and Crimes (UNODC) reported that Phongsaly province had 3,872 ha of opium poppy cultivation, accounting for 20% of the national total production, with 513 villages out of 611 growing opium and an addiction rate of 5.6%. Despite a major decrease in these numbers after the government ban on opium poppy cultivation, Phongsaly, which currently accounts for the highest number of districts below the poverty line, remains one of the major opium producing provinces in the country[4].

Change in the economic profile of such communities requires technical and economic support to enable viable and sustainable income generating activities, investments in basic infrastructure and access to credit and savings funds.

On the other hand, China has planned to build a high-speed railway to connect Kunming with Bangkok through Vientiane. The line will pass through Oudom Xay where Chinese immigrants have arrived in numbers and built commercial centres including hotels and supermarkets.

Oudom Xay borders China to the north and Phongsaly province to the north east. It has relatively rich natural resources particularly iron, salt, zinc, bronze and antimony. Its agricultural products are mainly corn (maize) and rice.

Given the general economic situation of the region, one can see why funding for the AH-13 is lacking. It has very little potential for revenue generating since its users will be mainly the poor. According to the UNODC, in Phongsaly province, the severe insufficiencies in basic infrastructure largely contribute to the fact that more than 50% of villages have no access to markets, while the daily per capita income is well below 1 USD. Both Odoum Xay and Phongsaly are poor provinces with high potentials in agricultural and mineral resources. Providing sufficient access to market is a fundamental requirement to support economic activities and poverty alleviation.

[4] https://www.unodc.org/laopdr/en/projects/I32/I32.html accessed in October 2013.

Another key feature of this route is as a cross-border connection with Viet Nam. It will have to deal with two different jurisdictions as well as likely different regulations when people and goods cross the borders. However, dealing with cross-border regulation is much easier when the connection has been formally established and maintained. Therefore establishing the AH-13 route has several benefits, i.e.: connecting northern Thailand to northern Lao PDR and northern Viet Nam (an extension of the AHN route would reach Myanmar as well), providing basic infrastructure for people in Oudom Xay and Phongsaly provinces so that they can have access to larger markets, and supporting poverty alleviation in these provinces; thus this project has high socio-economic returns.

Lao PDR needs support, especially from neighbouring countries and the international community. Given the facts that: (i) Lao PDR has low fiscal capacity to finance all infrastructure needs, (ii) the project utilisation is not revenue generating, (iii) the project will have economic impact in the regions and neighbouring countries, and (iv) both Lao PDR and Viet Nam are categorised as beneficiaries of leading international development partners; we propose some possible options for financing the project:

3.1.Sovereign Financing, Public Procurement

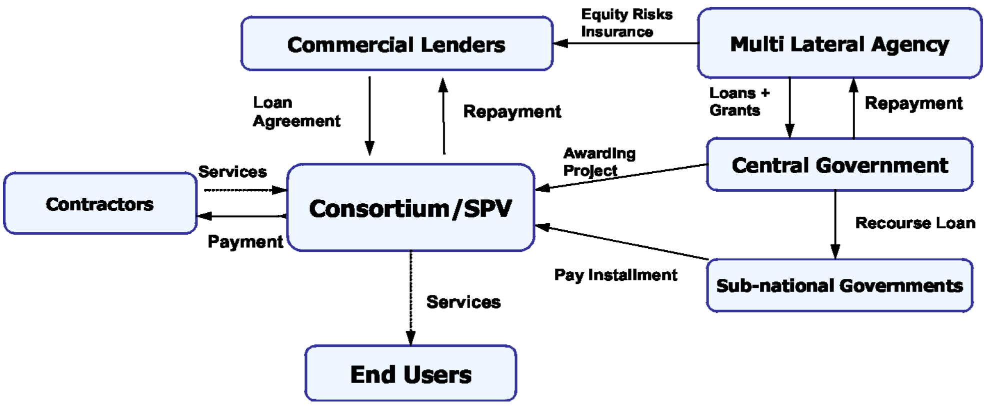
The Government of Lao PDR must be responsible for a major part of project cost. The Thai government can possibly share the burden by contributing grants. The main sources of funds may come from international development partners, such as The World Bank, ADB, and OECD, or bilateral supports including JICA and AusAID. Procurement for this project will be carried out through traditional public procurement in compliance with international standards.

The most important thing to be considered is the estimation of fiscal liability to be born by the Lao government. This should be capped at the ceiling allowed by international standard to guarantee the fiscal sustainability of the national budget. If the amount of liability is higher than a safe threshold, the international community should take on the rest, possibly through grants.

3.2.Sovereign Financing, PPP scheme

Under sovereign financing, it is still possible to apply a PPP scheme. The objective is to improve efficiency and the quality of the project's deliverables. While the private sector will not sell tickets for use of the road to end users, the government can pay the construction and Operation and Maintenance (OM) costs in regular installments within an agreed period. The private sector may have better capacity to deliver the project and carry out maintenance, as well as to operate the road. We can expect higher reliability and quality if the private entities are the best ones chosen through competitive bidding.

Figure I.2. Possible Model for Route AH-13: Option 2 Road Only



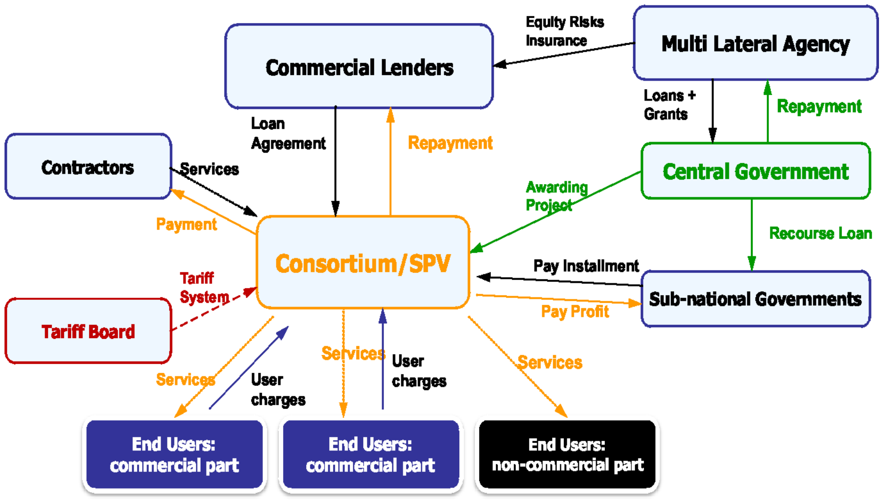
3.3. Hybrid Financing, PPP scheme

Route AH-13 has 391km of total length, which means that it is a very long road. It is consequently difficult to get a single sponsor for the whole project. The project can be divided into several blocks of work, in which different lenders or sponsors can participate. The financing scheme can be explored for some possibilities, for instance:

a. Mix of national or provincial budget, grants and loans from development partners, and upfront construction funds from the private sector which will be converted into loans paid in several installments.

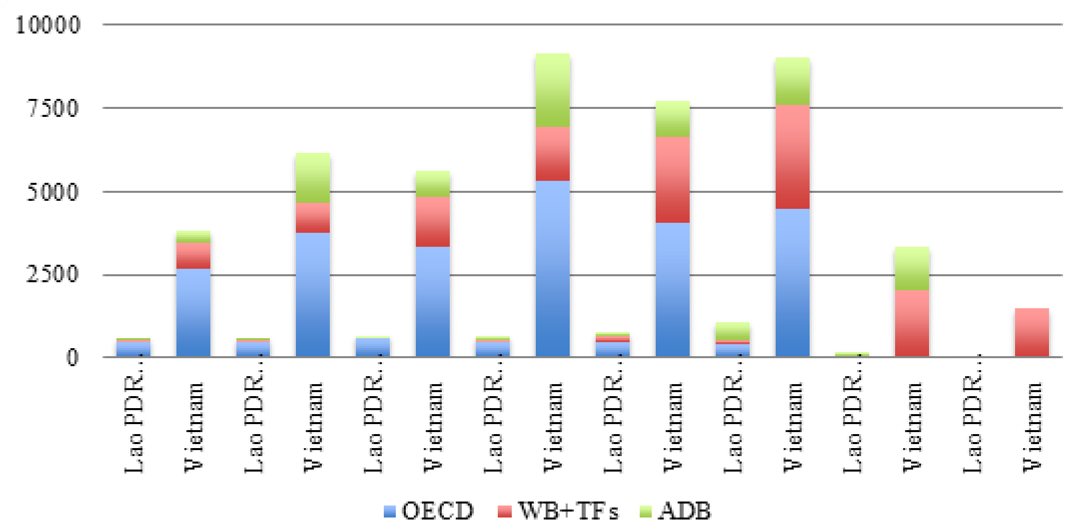
b. Some blocks may be financed by the private sector under a package of commercial development plans, for example: tourism facilities/complex, markets, real estate, etc. integrated with the road block. Hence, the project is expanded from a purely road project to an all-inclusive project. The private sponsors cannot get revenue from the road because it will be made available free as a public good, but the commercial complex will be an income-generating project that will pay for the road construction and OM costs.

Figure I.3. Possible Model for Route AH-13: Option 3 Hybrid Financing: Integrated Block (Road + Commercial Complex)



The figure below shows the amount of aid received by Lao PDR and Viet Nam during recent years. One can see that Viet Nam is a more active recipient compared to Lao PDR, sourced from various donors. In terms of preference as aid recipient, both Viet Nam and Lao PDR have good possibilities of attracting aid to finance the project. Lao PDR has been the lowest aid recipient, and with its welfare condition, there is a strong justification for international donors to provide better support. However, in terms of issuing bonds to finance the project, this would be very difficult for Lao PDR since the country has no record of sovereign rating assessed by any leading rating companies. Therefore the most feasible sources of funds are probably: sovereign loans, grants, loans from the private sector, and project finance invited by wrapping up the road project into a more wide-ranging project.

Figure I.4. Aid flows to Lao PDR and Viet Nam (US$ million)



Source: [www.aidflows.org,](http://www.aidflows.org) selected.

PPP Direction

This part discusses the direction for PPP development in ASEAN region. Focusing on the key and supporting factors to be scoped in the process, the study eliminates several factors that matter in developed economies but too advanced to be implemented in immediate actions in the region.

4.1. Key Factors

4.1.1. Public

Regulations

- ***Law on PPP.*** The starting point for an effective PPP program is a comprehensive PPP policy supported by well-trained public officials, guidance materials and robust governance structures. PPP transactions are generally quarantined from other procurement policies and subject to specific approval and governance processes. A country with sound institutions may not need a regulatory framework specifically to manage PPPs. The PPP contract is internally regulated and contains mechanisms to deal with output quality, dispute resolution and change management. Output pricing is mostly agreed at the time of contract close and is subject to periodical adjustment referenced to an indicator such as the consumer price index. An effective contract management framework is necessary to deal with the *ex post* administrative and performance matters. A country that still has problems on regulatory quality is strongly advised to enact a specific regulation on PPP. The power of this regulation must be sufficient to be enforced without intervention from other conflicting regulations. A good regulatory framework will increase private entities' certainty and confidence.

- ***Providing Certainty.*** Investment in PPPs is enhanced with greater certainty measured with sovereign risk and ease of doing business indicators. A sovereign investment grade credit rating will have a significant positive impact on attracting investors, especially foreign investors, and will reduce interest rates, fiscal burdens, and transaction costs.

- ***Dispute resolution*** mechanisms embedded in the PPP contract will provide low-cost and speedy resolution of disagreements through mediation and arbitration. Alternative dispute resolution services may be provided by industry associations, government agencies or registered individuals or firms.

- ***International support is important to improve creditworthiness as well as investment certainty and market confidence.*** Country policy should allow the project to gain from non-monetised benefits offered by development partners and promotion to the international community.

- ***Optimal risk sharing and government support.*** There should be clear and optimal risk-sharing between public and private entities, the efficacy of which may be tested by benchmarking. Government support for projects should be fully calculated within affordable range, and recognised as a contingent liability in state accounts.

- ***Contract management framework.*** The contract between the government and the successful bidder needs to be managed under a contract management framework prepared on a case-by-case basis and supervised by a trained contract relationship manager.

- ***Clear framework for governance and oversight.*** The whole process of offering and implementing PPP project should maintain transparency and accountability. The mechanism, timeline, and procedures must be made clear and consistent for all participants.

- ***Existence of PPP unit.*** A dedicated PPP Unit will play an important role in developing PPP policy and in project implementation in host countries. The Unit will act as a “single gate” to streamline project selection and approvals, provide technical and other support to agencies, and reduce transaction costs for potential investors. The Unit will have a pool of experts with access to transactional experience and a data centre, and will serve as a coordinating hub for PPP.

Process

- ***Articulated project development process.*** The very basic requirement underlying any PPP project is a government decision on whether the country needs the infrastructure concerned. Solicited and unsolicited projects should be subject to cost benefit analysis, and demand or options analysis before a decision to proceed is announced. The process should possess clearly defined review and approval stages. The government therefore needs to have a clear expectation about project outcomes before the decision to proceed is taken. The expected output will be a justification of how the project will be funded. The government should prepare a pipeline of projects and announce these in advance of the bid process. Industry liaison contributes to a stronger bid market and provides the opportunity for bidder feedback.

- ***Next, the government appraises the options to finance and fund the project, identifies the alternatives and determines how the project will be funded in the long-term.*** Thus, the government can make a preliminary estimate of costing, undertake risk analysis, pricing and allocation and construct a public sector comparator or benchmark.

- ***The procurement decision will determine the method of delivery for the project, whether it is a traditional procurement or PPP.*** When government considers the PPP method, this must be communicated to potential investors to see their responses.

- ***The bidding process*** should comply with the principles of transparency, pre-qualification, and competitive bidding.

- ***The selection process*** should be driven by value for money (VFM) determinations; the winning proposal is the one giving the highest utility for the use of public funds.[5]

- ***The contract should be comprehensive, so as to minimise disputes and should include a clause covering dispute resolution.*** In final negotiation, government structures the financial scheme and provides support to reach agreement with the private sector within a competitive dialogue frame.

- ***Government must estimate the contingent liabilities of the project and put these into its budgeting process.*** There should be sufficient mechanism applied to minimise the country's exposure to potential fiscal burden in the future. It emphasises the importance of having priority of approved projects, because each guaranteed project will bring fiscal consequences

- ***To avoid failure at the execution stage, proper monitoring should be conducted.*** One effective way is to establish a "dispute prevention board", where a board of experts in construction and project management regularly checks the process of construction. Mistakes can thereby be detected earlier and corrected before they ruin the project. The boards at the construction and operational stages may consist of different experts

- ***Negotiations over contractual and financial matters***. The PPP Unit should recommend independent and professional negotiators to finalise contracts with the preferred bidder. This may include competitive dialogue and repricing of risk allocation when negotiations have resulted in significant risk take-back by government.

Capacity Building

- ***There should be continuous and systemised capacity building programs*** designed for senior and line managers, private consultants

[5] Value for Money is defined as maximum utility derived from the combination of price, efficiency and effectiveness variables from money spent. It is a determination that takes into account the qualitative and quantitative merits of a proposal.

and firms to build an understanding of PPP policy and project implementation processes. This may include skills training in risk analysis, negotiations, contract management, discounted cash flow analysis and other specific technical training for PPP procurement.

- ***Evaluation and documentation:*** proper evaluation and documentation will support learning process, knowledge exchange and/or accumulation, and record lessons learned, and facilitate post-evaluation of returns.

4.1.2. Private

- ***Open for both domestic and foreign participants.*** Government can encourage local participation to build domestic capacity by designing appropriate incentives.

- ***Access to larger financial sources.*** Government facilitates the private sector gaining increased access to various financial sources. Long-term public funds such as pension funds may be accessed to facilitate investment in sustainable PPP projects. Flows of foreign capital for PPP projects should be assisted with revisions, where necessary, of foreign ownership laws, exchange controls, repatriation of dividends and interest and taxation regulations.

- ***Managing risks.*** Managing difficult risks requires the use of sound risk analysis and management practices. As a rule of general application, risk should be allocated to the party that is best able to absorb, mitigate and manage risk in a cost effective manner.

4.1.3. Feasible Projects

- ***Government should define national priorities in the infrastructure development plan.*** This will help national allocation of the budget and put the market on notice about the impending project pipeline. This is important for firms to arrange finance and assemble their bid and technical teams ahead of the bidding process.

- ***The size of projects matters.*** Projects that do not meet minimum transaction size should not be progressed under PPP. Transaction costs for PPP projects are high and thresholds need to be set to ensure economies of scale.

4.2.Supporting Factors

- ***Supporting PPP Unit.*** A well-designed and functioning PPP Unit will expedite the application of PPP policy and project implementation. The PPP Unit should be designed with a view to the structure and processes of the host country government, the authority and scope of operations needed to do its job effectively, governance, accountability and reporting framework and financing requirement.

- ***Regional cooperation.*** PPP policy within ASEAN offers benefits for greater international and regional cooperation, although present arrangements are informal. To support PPP development in the region, a more formal approach would be to establish a PPP Centre of Excellence with responsibilities to (i) support the establishment and development of PPP Units in member countries, (ii) design capacity building programs, (iii) provide advice and technical assistance to national PPP Units in PPP policy and projects, (iv) accumulate and disseminate PPP knowledge and best practice across ASEAN member states, and (v) facilitate awareness among stakeholders about national PPP programs. The Centre of Excellence would not become a project lender or donor agency.

- ***International development partners can continue to play a role in providing grants, loans, technical assistance, and capacity building.*** The PPP Centre of Excellence could provide a key coordination and information role here.

The Concept of "PPP in ASEAN Way"

PPP has become increasingly important in being utilised as a financing scheme for infrastructure development. Although PPP has major prerequisites and is deemed suitable for more developed markets, this does not necessarily mean that emerging economies like ASEAN cannot adopt it. Innovation is needed to capture the essence of PPP principles for them to work in the unique environment of ASEAN. Hence, the "PPP in ASEAN Way" is a PPP system tailored to suit the conditions of ASEAN Member States especially the states' development stages and regional features.

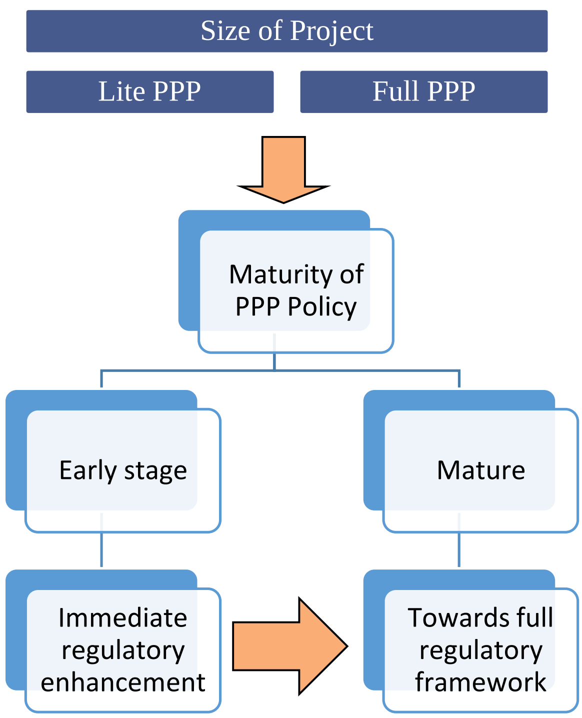
5.1.Characteristics

"PPP in ASEAN Way" would comprise a dualistic approach that takes into account the different stages of PPP policy development by recognising two broad categories of transaction (see Figure I.5):

a. *Lite PPP:* policy and implementation frameworks that expedite projects and reduce transaction costs. Lite PPP would be suitable for small to medium size projects (USD 20-50 million) that feature a state availability payment (for example, education and health services), and do not involve currency mismatch risk.

b. *Full PPP:* projects over USD50 million in value that require a comprehensive policy framework to address problems of currency mismatch, design and construction complexity, and demand risk, different stakeholders (tiers of government, investors and sponsors, affected parties).

Figure I.5. Two-Stage Approach of "PPP in ASEAN Way"



Policy provisions are needed that recognise regulatory enhancement for complex projects, to quarantine them from implementation delay in matters such as environmental approvals and regulatory exemptions or from normal procurement procedures. However, an *ad hoc* approach to large and complex projects should not eliminate the need for wider regulatory reform to improve the attractiveness of doing business in the country, support Foreign Direct Investment (FDI) for PPP projects, improve governance and reduce uncertainty. The development of national capital markets is a priority with the long-term objective of encouraging greater cross-border capital flows and development of regional bond markets.

Meanwhile, "PPP in ASEAN Way" also gives special support for cross-border connectivity initiatives**.** "PPP in ASEAN Way" should not be viewed as a separated process but instead as part of the connectivity. Greater cross-border collaboration in member countries provides opportunity to support regional connectivity. Thus cross-border infrastructure must be prioritised and supported.

On top of that, "PPP in ASEAN Way" supports involvement of the domestic private sector. There should be a significant role for domestic private companies, with benefits that include employment, technology transfer, local currency, local subcontractors, domestic insurance and financial services, and opportunities for international collaboration.

In summary, "PPP in ASEAN Way" is characterised by:

1. **Recognition of different stages of PPP policy and program development in ASEAN member nations.** Based on the maturity of PPP policy, there are two stages of approach: to address "immediate regulatory enhancement" and "towards full regulatory framework". Meanwhile, based on the size of project, there are two types of PPP schemes: early stage or "lite PPP" and mature or "full PPP".
2. **Special support for cross-border connectivity initiatives.**
3. **Support for involvement of the domestic private sector.**

5.2. Steps to Realise PPP in ASEAN Way

5.2.1. PPP Guidelines

Among the first efforts is to provide ASEAN member states with suitable PPP guidelines. The guideline is derived from the PPP Concept (PPP in ASEAN Way) and PPP Direction, which are main output of the "Financing ASEAN Connectivity" study commissioned to ERIA by The ACCC.

The document conceptualises the characteristics of PPP in ASEAN Way, describing major elements of PPP framework and tailored components to serve ASEAN characteristics. A follow-up study is proposed as immediate action with major goal to formulate PPP Guidelines.

5.2.2. PPP Forum

To establish realistic and workable PPP Guidelines and supporting technical documents, as well as to disseminate and build equal perception across ASEAN member states (AMS), we need constant inputs and feedback from stakeholders. The Forum can become a means to communicate the concept and practical approach, providing knowledge exchange and sharing experience. The feedback should be used to improve the PPP Guidelines and supporting documents. In the Forum, the idea of setting up a PPP Centre of Excellence (COE) should be communicated to determine the objectives, the functions and mechanism, the structure, and the timing.

The PPP Forum would ideally be run under the ASEAN Secretariat (or The ACCC) with active participation from relevant ministries/institutions responsible for infrastructure or PPP in each country. ERIA could take an active role as facilitator and/or resource person.

5.2.3. Technical Assistance and Capacity Building

While the PPP Forum is running to gather ideas and support, small and limited support can be provided in the forms of Technical Assistance (TA) and Capacity Building (CB). This would serve as: (i) real support for the member countries that need it urgently, (ii) assessment of the real capacity to support PPP when the PPP COE is established, (i ii) showcase that AMS are serious about implementing PPP in the right way to support infrastructure development, and (iv) way to identify potential stakeholders to support PPP development in the region.

Funds for this activity could be requested from institutions or partner countries in EAS, meanwhile ERIA can play a role as secretariat and deploy some experts in PPP.

5.3. Further Step: PPP Centre of Excellence

In the near future, the following outcomes could be expected through implementation of the abovementioned actions:

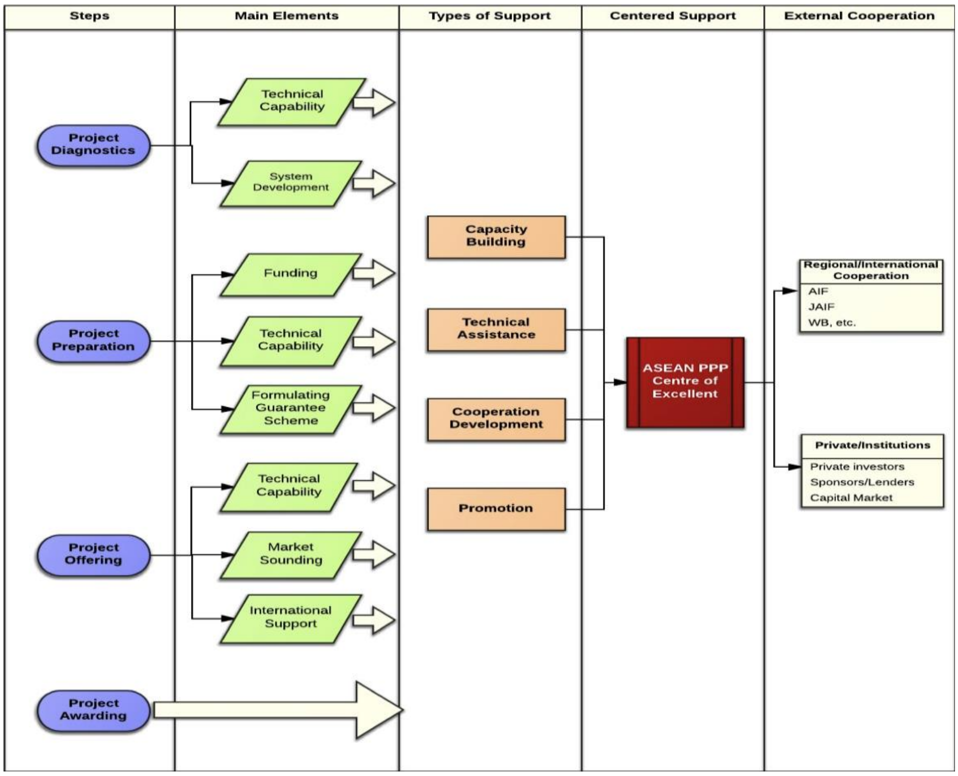
- The PPP Guidelines become mature and sufficient to be utilised as reference in the region,
- The Forum maintains regular communication,
- Success stories on TA and CB in the region.

The above situation will increase demand and support for the region to finally talk and act seriously to establish the PPP Centre of Excellence (PPP COE) (Figure I.6). PPP COE will support the development of PPP in the region and increase the mobilisation of financial resources.

Figure I.6. Roadmap for PPP Centre of Excellence

The concept of PPP COE shall be developed by considering lessons learned, existing progress of PPP development in the region, and expectation for future targets. The proposed preliminary idea of PPP COE could be illustrated as in Figure I.7.

Figure I.7. PPP Centre of Excellence



The Centre's activities will include, but are not limited to, the following[6]:

- Disseminate best practice and other lessons of global and ASEAN PPP experience, both successes and failures;
- Coordinate activities of and provide assistance to individual country authorities. Advice should focus on project selection and development, especially on risk analyses and allocation;
- Support cross-border PPP projects;
- Give advice on the method and pattern of financing consistent with the state of capital market;
- Give advice to country authorities on how PPP-readiness (legal, regulatory and institutional arrangements) can be enhanced;

[6] Shishido, Sugiyama, Zen (2013) with some changes.

- Discuss with the potential private partners on the constraints they face and on their preferences in approaches and financing as well as the constraints;
- Coordinate or manage to provide strong technical assistance and training programs to staffs of member country PPP units. It needs to make sure that the training is effective—such as, for example, secondment or internship programs to the PPP institutions in advanced countries, rather than short seminars and study tours.
- Finally, the PPP COE will also need the donors' support who would assist establishing and operating this center. Such assistance could come from major bilateral donors in the Asia Pacific region as well as key international development agencies.

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Annexes

Country Infrastructure Development Situation:

- *Indonesia: unequal infrastructure development across regions, recent progress on regulatory development, good practices on managing contingent liabilities (fiscal discipline), multi-tier government in handling PPP.*
- *Philippines: progressive implementation of PPP in both hard and social infrastructures, championship of inter-departmental coordination, strong support from the President, multi-tier government in handling PPP, quite substantial use of external support.*
- *Malaysia: clear objectives of national development, still unclear framework of infrastructure financing, utilizing bonds to finance infrastructure development.*
- *Thailand: lessons from over estimated revenue of PPP projects, managing risk allocation, new PPP law: hope for better framework, list of project, and PPP committee.*
- *Singapore: dual roles of public sector both as regulator and operator have weakened interests in PPP, efficient public sector, no project list for PPP, no champion for PPP outside MOF, PPP as part of procurements under Best Outsourcing framework.*
- *Brunei: small population, abundant oil and gas revenue in the long term has reduced the needs of strong private sector, applying limited PPP.*
- *Cambodia: lacking fiscal resources, low capacity, lacking regulatory framework, and challenging fiscal sustainability, increasing role of private participation, good progress in managing debt, improving credibility before international donors.*
- *Lao PDR: lacking fiscal resources, low capacity, lacking regulatory framework, and challenging fiscal sustainability, problem with managing debt, no credit rating, undiversified sector of private sector participation (focus on hydropower), inappropriate financing mechanism has led to macroeconomic instability.*
- *Viet Nam: Macroeconomic instability, high inflation, price volatility lead to higher risks for projects of infrastructure, high debt makes difficult to increase ODA, new PPP law is competing with government priority for reducing inflation.*
- *Myanmar: lacking fiscal resources, low capacity, lacking regulatory framework, and challenging fiscal sustainability, no credit rating, heavily dependent on ODA, as new emerging economy with quite large population*

and area Myanmar has potential to attract investment and support from international community.

Table I.A.1. Summary of PPP Implementation in ASEAN Member States

Country	Public Body Responsible for Implementation	Type of Private Sector Participation	Projects/Sector	Background/ Progress
Brunei	Department of Economic Planning and Development	Not yet determined	Housing	Just started in 2010. No specific regulation for PPP.
Cambodia	Not determined	Concessions, BOT (although there are no regulations)	Power, and limited projects in water and transport	Concessions Law issued in 2007. Still no implementing regulations
Indonesia	Line Ministries, Planning Development Agency, MOF	All types of PPP schemes	Transportation, roads, irrigation, drinking water, wastewater, ICT, power, oil and gas.	Under the new regulation (President Regulation 2011): One IPP project waiting for financial closing, 9 other projects in the pipeline.
Lao PDR	Line ministries, subnational government	Concessions	Targets: energy, air transport, telecom, roads, railways, other designated activities (water, waste management, insurance, banking)	No specific law. Limited, projects include energy, transportation, and community market.

Country	Public Body Responsible for Implementation	Type of Private Sector Participation	Projects/Sector	Background/ Progress
Malaysia	UKAS (PPP Unit)	All types of PPP schemes	Any sector fulfilling the criteria	Privatisation Masterplan and PPP Guidelines 513 projects during 1983-2010 period
Myanmar	Line Ministries with approval from Parliament	Traditional Procurement, concession (port handling)	Transportation, energy, water, seaport services	No specific law.
Philippines	PPP Center Approving bodies depend on size of projects and authority level (national or subnational)	Various BOT and contracts, joint venture, concession, lease.	All types including social sectors	BOT Law Many projects.
Singapore	Ministry of Finance	Variations of DBFO and DBO	Various, including social infrastructure	Introduced since 2004 under Best Sourcing Framework, 8 projects awarded

Country	Public Body Responsible for Implementation	Type of Private Sector Participation	Projects/Sector	Background/ Progress
Thailand	Line ministries submit application to NESDB and MOF then to Council of Ministers 4 will be centralised through SEPO	Concessions ,service and lease contracts	Various infrastructure types	(New) Act on PPP (BE 2556) private sector participation shall be centralised in State Enterprise Policy Office (SEPO) since October 2013. BTS, Motorway, Tollway
Viet Nam	The Ministry of Planning and Investment (MPI) establishes interdepartmental working group	PPP as special case of BOT and BTO	Roads, railway, urban transport, ports, water supply, hospitals, waste treatment, power, and others decided by the Prime Minister	Regulation on PPP has been issued in 2011.

Source: Shishido, Sugiyama, and Zen (2013) updated