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Public Private Partnerships – The new paradigm for Chinese Companies for funding Africa Infrastructure Project?

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I am going to briefly look at what PPP projects are; how key risks associated with PPP projects are typically allocated among the principal project participants; how the emergence of PPP projects in Africa and the increasing external funding problems in many African countries will make PPP Projects more or less prevalent; and lastly whether there is a hybrid PPP model that cash strapped Africa governments can consider.

1. What is a PPP Project?

The term "public-private partnership" (**PPP**) does not have a particular legal meaning. It can be used to describe a wide variety of arrangements involving the public and private sectors working together in some way. It is therefore necessary to be very clear about why the public sector is looking to partner with the private sector, what forms of partnership they have in mind, and how they should articulate this complex concept.

Among the key rationales for the use of the PPP model in the context of infrastructure projects are the following:

(a) the utilisation of private sector capital and expertise for the efficient procurement of government projects;

(b) more certainty for project delivery timelines and budgets;

(c) the sharing and allocation of risk as between the government and the private sector parties to that party best placed to manage such risks; and

(d) the easing of governments' balance sheets and the freeing of capital to be directed towards other needs.

As the name suggests, PPPs are considered a partnership (in the broadest sense) between governments and the private sector, not a divestment of responsibility. While the government retains overall responsibility for delivering the particular service, the means and responsibility for such delivery are passed to the private sector. The government retains control over the means of delivery by way of intricate and detailed payment and performance mechanisms.

There is no single or "standard" form of PPP project or structure and some of the more common types are build-operate-transfer, build-own-operate and build-transfer-operate models.

A PPP project can essentially take whatever form the parties desire in order to meet the objectives of the project in question. However, a few of the more common forms implemented include the following:

(a) **Build-operate-and-transfer** (BOT) – the private party usually undertakes the designing, building and financing of the relevant facility. Once completed, the private party then carries out the operation and maintenance of the facility during which times it is allowed to charge facility users appropriate tolls, fees, rentals and charges not exceeding those proposed in its bid or as negotiated and incorporated in the relevant contracts with the government. The facility is transferred to the government at the end of the fixed term; these are sometimes referred to as "DBFO (T)" projects.

(b) **Build-own-and-operate** (BOO) – this is similar to the BOT arrangement, although the private parties retain ownership of the facility at the end of the fixed term.

(c) **Build-transfer-and-operate** (BTO) – this is another variation of the BOT arrangement whereby title to the facility is transferred to the government, whilst the private parties retain the right to operate and maintain the facility on behalf of the government.

2. Allocating key risks in PPP projects

In order to help understand one of the key rationales for employing the PPP model (allocation of risk to the party best able to manage it) it is useful to identify some of the key risks in PPP projects. The following are some of the key risks which must be managed in PPPs, how such risks can be mitigated and which party, generally, has the particular risk allocated to it. Depending on the project sector, there may be different risks which are relevant; however, the following are some of the more generic risks which can be applied in some form to most PPP projects:

1. **Completion Risk** – this is the risk that the project is delayed and does not reach the commissioning stage within the prescribed timeframes. This is of particular importance where the facility is being procured to meet an urgent need for the relevant procuring entity. This risk is typically allocated to the private party with exceptions for where the delay is not attributable to the action or inaction of the private party (for example, due to force majeure or government variations). This risk is commonly mitigated through the requirement to provide construction bonds/guarantees, insurances (where such risk is insurable) and delay liquidated damages.

2. **Force Majeure Risk** – this is the risk of occurrence of events beyond the control of both parties and which prevents either party from performing its obligations. This risk is generally shared between the parties; however, to the extent any such risks are capable of being insured against, they are often excluded from the list of force majeure events.

3. **Market Demand or Volume Risk** – this risk relates to a situation where the forecast demand for use of a particular facility (or the outputs of a facility) is not met. This is a common risk, for example in relation to toll roads, where alternative roads or methods of transport can act to reduce demand for the toll road. The allocation of this risk will often depend on the revenue model for the project. Where the private parties' revenue is based around user-pays charges (such as toll charges for a road), this risk is usually allocated to the private party. However, where the revenue model is on the basis

of availability payments, the risk often lies with the government as it is required to continue making payments so long as the facility is operational (at appropriate standards).

4. **Design/Output** – this relates to the risk that the capacity or output or performance of the project facility may not meet the agreed design criteria or project specifications. This risk is typically allocated to the private party and can be mitigated through a clear regime in the Concession/Offtake Agreement setting out the required technical parameters (or minimum functional specifications) and performance criteria or standards and a detailed oversight/monitoring mechanism and penalty regimes for failure to meet such parameters, criteria and standards.
5. **Finance Risks** – this is the availability of financing to develop a project, interest rates, inflation and foreign exchange risks. These risks are usually allocated to the concessionaire, although, in some emerging markets with a non-transferable currency, the foreign exchange risk (or a part of it) will be assumed by the government.
6. **Cost Overrun Risk** – this risk relates to the cost of a project overrunning projected amounts and is firmly allocated to the concessionaire. The concessionaire will usually seek to substantially mitigate this risk by arranging a fixed price lump sum construction contract.
7. **Political Risk** – this risk is of particular significance in Africa. It relates to the taking of action by a government which negatively impacts on a concessionaire's ability to complete and/or operate a project. It generally covers matters including acts of war or other conflict, the imposition of sanctions, blockades or embargoes and failures to issue or to renew consents required for a project. To the extent the loss or inability to perform obligations is due to the actions of the government, the risk lies with the government (see further below).

3. PPP in Africa

For all the indications that a move towards greater use of the PPP model in Africa is a big step in the right direction, it is without doubt that there have been various challenges for investors and governments. A few of the key challenges are summarised in the following key categories:

- **Political**

There are many elements within the wider political landscape which can hinder investor confidence in a region. These include a lack of transparency and accountability, risk of changes in laws and regulations, potential corruption, and public perception in relation to the aforementioned. These issues (or, at least, perception of such issues) are particularly prevalent across Africa, where allegations of corruption have plagued many projects, although investors who have experience in the region well understand such issues.

- **Financial**

At the heart of any investor's interest in projects is its ability to generate revenue, protect such revenue and be able to repatriate such revenue to its home jurisdiction. It will therefore be important that matters such as foreign exchange risk and transferability risk are adequately provided for in any PPP legal framework which is established. Governments will also need to strongly consider offering sovereign guarantees, bearing in mind investors' and lenders' long-term commitment to projects which can have a lifespan of 30+ years. In most countries, long-term PPP projects simply will not be bankable without such sovereign guarantees.

Also of importance is the need for ''buyers'' or ''procurers'' (in most cases the government or one of its entities) to have strong credit ratings, which is particularly relevant for projects where the revenue stream is based on availability payments (also referred to as ''capacity payments'' in energy projects). Availability payments are, generally, fixed payments which are periodically paid to the concessionaire across the life of the Concession/Offtake Agreement. Such payments are distinct from user-pays revenues, where the concessionaire's revenue stream consists of payments received directly from a user of a facility (for example, a toll paid by the user of a toll road). Hence, in order for investors to be confident that they will be paid availability payments, buyers and procurers need to demonstrate low credit risk for the life of a project.

Another issue of significance in some countries is the currency/foreign exchange risk where a country has insufficient foreign currency reserves to be able to price PPP projects in US dollars and thereby cover the foreign exchange risk for foreign investors. Such countries will be forced to denominate their PPP liabilities in their local currencies, which will mean the foreign investors will have to assume the foreign exchange risk of converting the income received into US dollars (or other foreign currencies). Such a risk will make such projects far less attractive to international investors as it will typically not be bankable and will therefore have to be assumed by the project's sponsors.

- **Legal**

Although there are clear signs supporting the view that robust PPP legal frameworks are being looked at seriously within parts of Africa, we are some way away from being able to point towards legal frameworks that meet international standards. It is without doubt that there is general acceptance that operating within

these regions carries certain legal risks. Despite this, in the case of PPPs, private investors will seek the comfort of sound legal platforms for PPPs when determining whether to partner with governments and invest in a particular market. It follows that, in order for any PPP legal framework to be successfully implemented and serve the purpose of attracting investment and giving comfort, the framework will need to be robust and well thought out. Not only will the framework need to draw on the successes of tried and tested PPP jurisdictions internationally, but governments will also need to allay jurisdiction-specific concerns which investors may have. Governments will need to be open-minded in their thinking and willing to reform frameworks where it is clear that they are failing to give investors the right comfort and incentives they require in order to invest.

The above can be achieved through various mechanisms. Examples include:

(a) strict requirements for clarity, transparency and accountability in procurement/bidding processes;

(b) the use of standard-form documentation, where possible, to reduce uncertainty for prospective investors; and

(c) building a consistent track record of risk allocation in order that investors have the benefit of precedent in the relevant jurisdiction in relation to a particular issue.

4. Africa's external debt problem

Since 2008, public debt in sub-Saharan countries in Africa has been rising at an increasingly rapid pace. By 2016, the subcontinent's gross public debt to GDP ratio had doubled. By 2017, some economics in Africa had run into serious trouble, and the multilateral organisations such as the International Monetary Fund and the World Bank have become much more proactive. Last year, the debt to GDP ratio breached the 50 per cent mark, and the multilaterals gently warned economies such as Ethiopia, Cameroon, Ghana, Kenya, Mauritania and Zambia that they needed to rein in public spending and borrowing levels. Some commentators, however, believe that, until one of Africa's big five economies – Nigeria, South Africa, Angola, Ethiopia and Kenya – becomes debt distressed, the alarm bells won't be truly rung.

In the meantime, a number of elements concerning the debt build-up are worrying. First and foremost, reduced transparency might blur the view on country-specific debt indicators. This raises the risk of unpleasant surprises with regards to public finance sustainability (like the case of Congo Republic recently). Secondly, more non-concessional borrowing by African government is increasing the cost of lending and creates a significant rollover risk. Thirdly, loans denominated in foreign currencies are exposing countries to currency fluctuations. This increases the risk of external debt suddenly surging in case of currency depreciation/devaluation. Therefore, it will be important for sub-Saharan African governments to strike a balance between the need for investments and managing public finances. Policymakers in the region are confronted with extensive (popular) demand for development and investments, yet the financing of public investments needs to be carefully considered to prevent it from leading to a new debt crisis.

Facing the dearth of infrastructure funding, an increasing number of countries in Africa are turning to PPPs in order to tap private capital. Although PPPs cannot fully solve this problem, they can provide significant financing where viable projects are carved out. Africa's current state of infrastructure calls for a massive adoption of the PPP model to accelerate infrastructure delivery.

Yet PPPs in sub-Saharan Africa remain a very small market, with projects concentrated in only a few countries, namely South Africa, Nigeria and Uganda. Together these account for 48 per cent of the 335 total PPP infrastructure projects in the region in the past 25 years. In the past five years, such projects have mainly been concentrated in the energy sector (78 per cent) – mostly renewables – followed by transport (22 per cent).

Some African countries are hesitant to embark on PPPs as a result of prior bad experiences with ill-prepared PPPs or even with less than competent PPP project sponsors. However, there are ample PPP opportunities waiting to be realised on the African continent for the benefit of all stakeholders so, in my opinion, the time for an infrastructure revolution via PPPs in Africa has arrived.

Experience shows that (1) **starting small then gradually embarking on larger PPPs based on lessons learned** and, importantly, (2) **higher risk allocation to government in the first generation of PPP projects** can provide a lot of advantages and go a long way in unlocking the flow of private capital into PPPs once investors and lenders develop enough comfort with the PPP environment of a country. I will explore some ideas on this second theme in the next section.

5. Is a PPP hybrid model the way forward for African infrastructure projects?

One of the fundamental goals of PPP projects is the transfer of risk from the public to the private sector. This, alongside private sector expertise and financial discipline, including, importantly, assuming the financing responsibilities for the projects, is what makes this model so attractive to governments.

In developed PPP markets there is a considerable transfer of construction, operation and maintenance,

financing, technology and, in many cases, demand or market risk. The more developed and sophisticated the market the more risk tends to get transferred to the private sector as the private sector gets increasingly innovative in how it manages and mitigates risk, very often by apportioning key risks to the suppliers and contractors in the project's food chain.

This approach works well in developed markets, where the financing risk is not usually the driving motivation for the government party in the overall risk allocation jigsaw.

Where, however, as in Africa, PPP projects are seen as a way of financing projects rather than as part of the public procurement process, this approach is more challenging.

Chinese contractors have traditionally participated in infrastructure projects on either an EPC basis, working under the umbrella of an inter-governmental concessionary loan, or an EPC + F basis, where the contractor will agree that, as part of the contractor package, it will undertake to assist in facilitating the financing of the package. This typically involves Chinese banks providing up to 85 per cent of the EPC price of the project supported by Sinosure political and commercial insurance. The EPC + F model (or rather Sinosure) requires either a government guarantee or a guarantee from the project's sponsor/owner, who must meet certain minimum financial and balance sheet tests. In these circumstances, in contrast to PPP projects, there is little, if any, commercial risk assumed by the Chinese contractor beyond the construction risks. The contractor's lenders will, however, assume the payment risk under the guarantee from the government or the project's sponsor/owner.

To make PPP projects more attractive to Chinese contractors, therefore, it is my view that a hybrid model is required: one that bridges the significant gap between the traditional developed market model of maximising transfer of risk and the more risk neutral model Chinese contractors have grown accustomed to.

Let me illustrate some ideas of ways in which some key legal and commercial risks can perhaps be retained and assumed by the government party in order to make PPPs more attractive to, and less risky for, Chinese contractors.

- **Availability/demand risk**

In most PPP infrastructure projects the demand or market risk is one of the most significant risks for the concessionaire. If one takes the example of a PPP road project this can be structured on the basis of user fees (or tolls) paid by the public using the road or on the basis of the government making payments to the concessionaire as and when the road is available for the public to use. In these circumstances the demand or usage risk usually remains with the government.

The availability-based PPP model has its genesis in power purchase agreements used in independent power producer projects (IPPs), where the power off-taker was a government. In such projects, private investors typically build a power generation plant and contract to sell the electricity generated to a publicly-owned power utility.

The government assumes part or all of the demand risk and makes a minimum payment for a service, in this case the availability (or capacity) of the power plant, whether or not part or all of its output (energy) is actually required – in effect a form of ''take-or-pay contract''. Further payments are usually made for usage, to cover at least the cost of fuel for the plant, but also in some cases for the payment of additional energy if and when it is actually delivered.

A further development of the power purchase agreement structure is also used in social infrastructure projects, such as schools, hospitals, prisons or governmental buildings, as well as in other projects that are not ''self-funding'', such as rural roads. Such PPPs are used where accommodation is provided or where equipment or a system is made available. In all these cases, payments are again generally based on the availability of the accommodation facility, equipment or system to a defined standard and not on the volume of usage. The mechanism that determines the level of payment for the service is usually set out in considerable detail in the project agreement itself, and, accordingly, the role of a regulator may be much less extensive or even non-existent.

This availability model can also be utilised on a wide range of projects including utilities, roads, rail, ports and buildings.

- **Currency risk**

Projects derive their revenues from either domestic sales (as in the case of power, water and infrastructure projects) or exports (as is the case with most natural resources projects), or a combination of both. Domestic revenues may be denominated in (or may be indexed to) a freely transferable currency, but are also frequently earned in the local currency. This is perhaps unavoidable as local consumers will expect to pay for their utilities and public services in the currency in which their own incomes are earned. Export sales, by contrast, are frequently priced in US dollars or another freely transferable currency.

The project's financing (i.e. debt service), capital and operating costs are likely to be incurred at least in part in international currencies. The liquidity of credit markets is generally deeper in US dollars and euros than it is in many domestic currencies, and thus debt is often incurred in those currencies. Large-scale capital assets are also generally priced

in internationally traded currencies. Local labour expense, rental costs and taxes are by contrast generally payable in the domestic currency.

The risks associated with differing currencies include revaluation, convertibility and transferability risks and these can have a significant impact on the risk profile of a project. Governments can, and frequently do, assume many of these currency risks particularly where foreign investors are sought.

- **Revaluation**

If revenues are earned in one currency but costs (including debt service) are incurred in another, then the project is exposed to the risk that either the relative value of its costs increases (because the value of the relevant currency increases) or that of its revenues diminishes (because the value of the relevant currency depreciates). Although foreign exchange rates may be regulated or ''pegged'' at the direction of the host government or central bank, no government can long ignore the effect of financial markets. Foreign exchange risk can, to some extent, be hedged in the market, but generally not for a period as long as the tenor of the loans. Even if available, the cost of hedging can be substantial, particularly if one of the currencies in question is thinly traded.

- **Convertibility**

To help manage limited access to foreign exchange, host governments may restrict access to foreign exchange. In such circumstances, the project company may earn revenues in one currency, but may be prohibited from converting it into another, even if its costs (including debt service) are denominated in that other currency. Most cross-border credit agreements expressly prohibit borrowers from submitting payment of principal or interest in an alternate currency, and convertibility restrictions will thus result in default. It may be possible, but perhaps expensive, to insure against this risk through political risk coverage.

- **Transferability**

In some cases, the project company may in fact hold foreign currency, but is prohibited from transferring it abroad whether to satisfy lenders or other creditors or to pay dividends. To mitigate this risk many project financings call for the payment of all receivables due to the project company into an account pledged for the benefit of the lenders offshore, generally in a financial centre such as London or New York. This risk is also frequently insured against through political risk cover.

A project company may be able to hedge much of its currency risk through swaps or hedges. However, the market for such instruments may be limited in terms of both the aggregate amounts that can be placed and the length of the period for which hedging is available. This is particularly the case where the local currency market may be relatively small and volatile. A thin currency hedging market may result in the unavailability of hedging or a material impact on hedging cost where banks' swaps desks take full advantage of a captive project to price front-end fees and additional margin into their swap rates.

- **Political risk**

''Political risk'' can be a major factor particularly in developing countries and can add significant costs to the project. Every project will invariably require some degree of government involvement or authorisation, and may even need further state cooperation and support during operations. Therefore, some of the most apparent "political risks" include the possibility of the state or its agencies revoking authorisations, imposing new taxes and even nationalising or expropriating the project.

Certain projects, such as those related to energy and infrastructure, given their magnitude and political sensitivity, along with the fact that the host government or agencies of the government are likely to be involved, can rarely be treated simply as ordinary commercial developments, albeit on a larger scale. Therefore, such projects are an area where commercial, legal and political considerations intermingle.

Political risks can include:

- higher or selective taxes, duty or withholdings;
- currency devaluation;
- political instability following changes in government;
- nationalisation;
- confiscation or expropriation, with or without compensation;
- the imposition of, or adverse changes in, exchange control regulations;
- import restrictions/quotas on fuel or equipment;
- restrictions on remittances;
- in some countries, terrorism or sabotage;
- land and compulsory purchase issues;
- disputes between state and local governments or between government departments; and
- corruption.

In addition to political risks arising in the country itself, a number of cross-border political risks can occur, for example:

- restrictions on export licences for equipment or technology;
- currency/foreign exchange restrictions; and
- blockages or embargoes.

There are a number of ways of mitigating certain political risks. Political risk insurance cover may be available from multilateral agencies, for example under the World Bank guarantee programme. Export

credit agencies also provide political risk cover like Sinosure in China. Political risk cover may also be available from private insurers, although the cost is often high and the areas of coverage under these guarantees or insurance policies differ widely. In some cases investors may also rely on bilateral investment treaties (BITs) to gain some protection. Governments will be expected to cover any gaps by entering into guarantees with the concessionaire.

- **Viability gap payments**

There are many ways in which governments can support PPP projects. One way frequently used is for the government to make subvention or grant payments to the concessionaire to cover perceived demand risks facing the project. For example, taking a road or rail project, if the government is requiring the concessionaire to assume a significant part of the demand risk, the risk for the concessionaire can be ameliorated if the government covers part of this risk by assuming a minimum level of traffic on the road or railway and making periodic payments to the concessionaire accordingly. The amount and timing of these viability gap payments can be structured according to the support that the government wishes to give the project or the support demanded by the private sector to undertake the project.

- **Early termination**

A project can terminate (or be terminated early) for many reasons. Usually the reason can be categorised as either a government default, a concessionaire default, a prolonged force majeure event or a government risk event. In most concession-based projects once the project assets have been returned to the government, the government will either have to find a new concessionaire or develop and/or operate the concession itself. Most concession agreements will prescribe that the government must pay the concessionaire a payment of "termination compensation" to compensate it for transferring the project assets to the government. The amount of termination compensation, and specifically the elements that it will include, can materially affect the risk profile of a concession. If limited resource financing has been raised by the concessionaire to finance the project, then the lenders will be concerned to ensure that the termination compensation always includes at a minimum outstanding loans and interest (and related sums). The shareholders for their part will be concerned to ensure that their contributed equity at least will be covered and, where the reason for the default is a government default or government risk event, a sum on account of future foregone equity returns is paid to them. There are, of course a great many different ways of calculating termination compensation and clearly one of the key factors is the time when termination occurs (i.e. during the construction period or the operating period).

A typical termination compensation approach in emergency markets PPP projects would be:

Public authority default	Full payment of outstanding debt + equity + compensation for future lost profits
Concessionaire default	Full payment of outstanding debt + (maybe) equity already contributed to the project
Political Force Majeure (i.e. political risks assumed by the public authority)	Usually similar approach to public authority default but with longer cure periods and (maybe) some risk sharing with concessionaire
Natural force majeure	Approach varies from full payment of outstanding debt to no compensation, just extension of time periods and life of concession.

One key issue with termination compensation payments is that they can be viewed as a form of government guarantee for the project and subject to the country debt limit issues discussed earlier, despite the fact that the government acquires the project's property and assets upon payment of the termination compensation. An imaginative way of trying to manage this issue is the current approach in Nigeria, where in the renewables sector the regional governments are structuring termination compensation arrangements as "put and call option agreements" (PCOAs), with both parties having rights to put or call (i.e. transfer) the project's assets to the government with the put or call price being calculated on a substantially similar basis to the calculation of termination compensation.

- **Change in law**

The concessionaire may require protection against changes in law that may have a material and adverse effect on the project or the project's economics such that the risk profile of the project is changed in a material way. Where there is no specific government involvement in a project, then the lenders' recourse is likely to be limited to political risk or commercial insurance, which may offer some relief or recourse to the shareholders. However, where there is a significant government involvement in a project (whether as a sponsor or shareholder, concession grantor and/or perhaps fuel or utilities supplier), then typically the concessionaire and its lenders will expect direct contractual commitments from the government under the concession agreement (if there is one) or a host government agreement (or similar arrangement). The scope of change in law protection that may be acceptable to a government will of course differ from project to project. Blanket protection for the concessionaire against all changes in law that have a material impact on the project or the project's economics would be rare. More typical is for these risks to be shared and for the government

to provide relief only against "discriminatory" changes in law, that is changes in law that directly impact the project company (and not other companies) or other companies undertaking similar (concession) projects in the relevant country (and not other companies). So, for example, a new (or increased) tax on all companies operating in a particular country will not be viewed as discriminatory but a tax on the project company only or on all companies operating similar private concessions will be treated as discriminatory.

In summary, PPP projects in Africa need to be structured on a more concessionaire-friendly basis to attract the participation of Chinese contractors and banks and these points represent some important elements to consider in structuring PPP projects in Africa. Government in Africa seeking infrastructure investment should have an open mind to a more appropriate risk allocation model that will attract Chinese and other foreign investors.

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