



## Public-Private Investment Partnerships in Health Systems Strengthening

Wilton Park  
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### **BACKGROUND PAPERS**

#### *OVERVIEWS*

1. Global Trends in Health Care Public-Private Partnerships  
Author: Matthias Loening
2. What Can We Learn from Public-Private Partnerships in Infrastructure?  
Author: Aarthi Belani
3. **Options to Structure and Fund PPPs in Developing Countries**  
**Author: Paul da Rita, Katrina Green and Clare Ashbee**
4. Privatization in the Public Interest: Key Success Factors in Purchasing Health Services from the Private Sector  
Author: Abby L. Bloom

#### *CASE STUDIES*

5. PPIP in the Reforming NHS in England: A Critical Review  
Author: Andrea Longhi
6. The Turks and Caicos Islands: A Public Private Investment Partnership for an Integrated Health System  
Author: Neelam Sekhri Feachem, Sian Betts and Heather McNabb
7. Reverse Alchemy - Turning Gold into Health Care in Papua New Guinea  
Author: Jane Thomason, Mathew Hancock, Lisa Richie and Geoff Scahill

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# Options to structure and fund PPPs in developing countries

## 1. Introduction

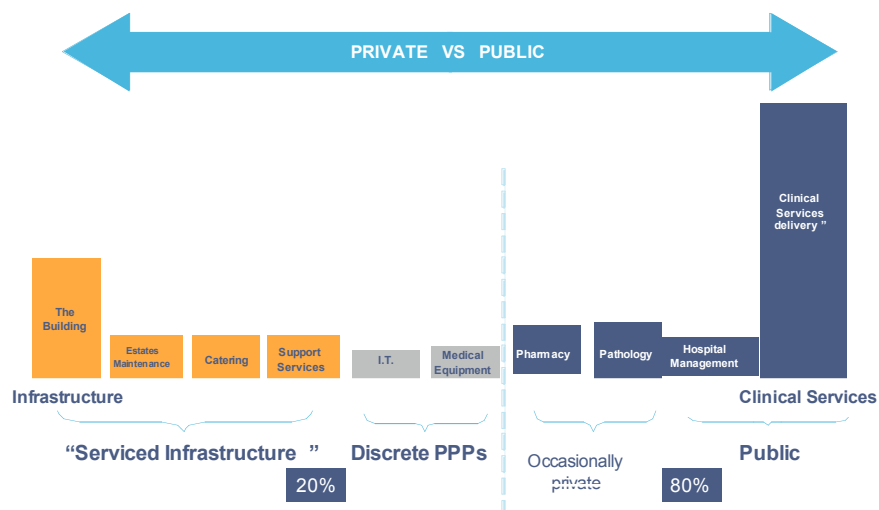
### 1.1 Definition of PPPs

This brief paper will look at the development of Public Private Partnerships (PPPs) over the last decade and examine some of the drivers which have made them increasingly popular as a way to renew healthcare investment, not just in Infrastructure but also in service provision. Where possible, the paper will use Case Studies to demonstrate in a practical sense, the commercial and financing issues common to these types of projects.

PPPs are defined in many different ways but the term is always used to describe a relationship between the public and private sectors where the private sector delivers investment to the public sector through financing, capability building or service provision. Early PPPs were developed mainly in the UK and Australia with the most common model being the UK's Private Finance Initiative (PFI).

For the purposes of this paper, we will define PPPs by reference to the service continuum set out in the diagram below and will focus primarily on those projects which require infrastructure investment.

The Public/Private Sector Interface in the provision of Healthcare



The orange boxes show the scope of service of a typical healthcare infrastructure project such as PFI projects typically seen in the UK and other parts of the developed world. One of the features of these projects is that even in the case of large infrastructure investments, the revenue consequences will rarely account for more than 20% of a hospital's annual

budget.. At the other extreme, we have private sector service delivery which is more akin to outsourcing. Very few projects include the full scope as set out above and even where they do (Turks and Caicos, Portugal), commercial arrangements are such that they are in effect two separate contracts. In some cases, more specialist areas such as IT and Medical Equipment can be subject to discreet stand alone PPP projects.

One of the characteristics of infrastructure based PPPs is that the public sector does not make any payments until the facility is completed. From that point, it will make an annual payment, referred to as the Unitary Charge or Unitary Payment, to cover the costs of funding and the on-going service costs, as well as shareholder dividends.

The long contract duration of these infrastructure projects, and the well understood nature of their risk profile makes them attractive to Project Finance funding structures which are characterized by long term loans, highly leveraged funding structures and in developed economies, a competitive funding market. The cost of finance will differ depending on the level of risk being taken. Senior debt (bank loans or bond issues) attract the lowest level of risk and therefore will have the lowest cost, while equity (risk capital) has the highest level of risk of not being repaid and therefore, investors will expect a higher return to compensate for that risk.

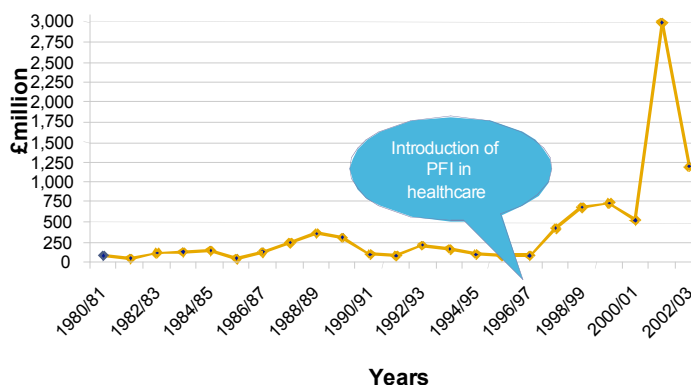
## **1.2 Drivers for PPPs**

It is important to understand clearly the primary objectives of Government before deciding on which type of PPP model is more likely to deliver the right results. Equally, when looking at precedents in other countries, it is also important to understand what those models were trying to address.

### *Infrastructure Renewal Model*

The UK's National Health Service (NHS) had suffered a lengthy period of little or no investment in Infrastructure as a result of which, the hospital estate was in an extremely poor condition and required urgent renewal. However, experience of large healthcare construction projects in the NHS in the early 1990s showed that the public sector was not managing these projects particularly well with large overspends and time overruns being commonplace. The Private Finance Initiative (PFI) was introduced and structured therefore to harness private sector skills of delivery (thereby transferring cost and overrun risks) and to raise private finance to fund the hospital rebuilding programme.

NHS Capital Spending and Commitments 1980 -2003



Source: PwC

As the graph illustrates, there was a substantial increase in capital investment following the introduction of PFI. The time lag between the introduction of PFI (1994/95) and the actual increase in capital spending represents the period during which the initial projects were being procured. A review of completed projects by Her Majesty's Treasury (HMT)<sup>1</sup> found that over 80% of PFI projects were delivered on time or early, compared to around 30% for traditionally procured projects.

### *Greater Efficiency Model*

In Portugal, whilst also wanting to renew some of its infrastructure, the government additionally set out with the aim of improving the efficiency of its health services. To this end it established a wide range of initiatives focused on the performance of public hospitals<sup>2</sup>, which included introducing a Diagnosis-Related Group (DRG) based financing system and corporatisation of public hospitals as well as developing a new PPP model. The Portuguese model therefore, moves further along the service continuum when compared to the UK and includes the provision of all clinical services by the private sector. In a later section, we will briefly look at the issues this raises and how the deals are structured in an effort to overcome some of these.

## **1.3 Typical structures**

Typically, PPP infrastructure projects are long term contractual relationships between the private and public sectors and where the private sector will take on a range of risks by designing, building, (part) operating and financing the

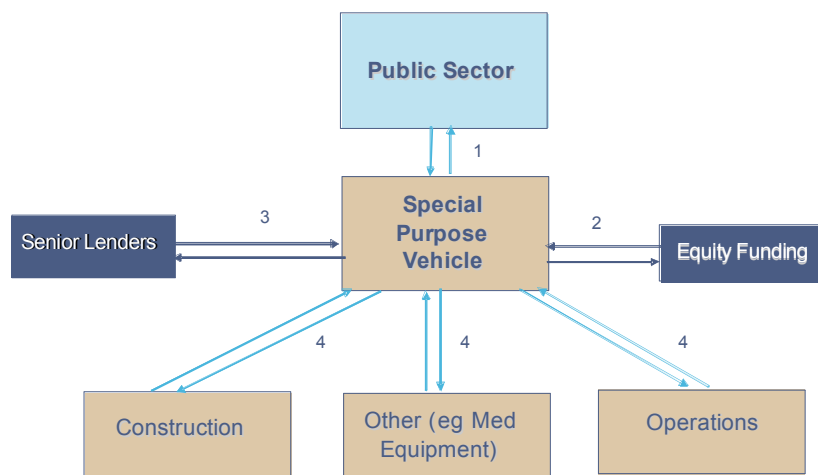
<sup>1</sup> PFI: Meeting the Investment Challenge – HMT (2003)

<sup>2</sup> Jorge Abreu Simoes – PPPs in Portuguese Healthcare Seminar – September 2005

facilities which will be used to provide some public function/service. There are a number of different structures which have delivered successfully and we will examine some of these below. As the PPP sector has evolved, particularly in the UK, we have seen models adapted to deliver shorter term contracts where financing is less significant and where services may only be required in the short to medium term.

### *PF1 Structure*

These projects are based on long term concessions where the public sector grants the private sector a contract (normally over 20 to 30 years) to design, build, operate and finance the infrastructure, such as a hospital. The diagram below shows such a structure and its constituent parts.



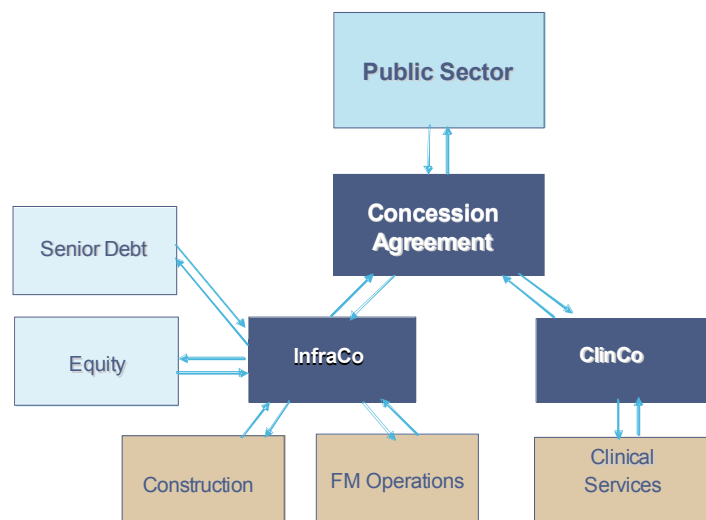
1. The public sector enters into a long term contract with a Special Purpose Vehicle (SPV).
2. The sponsors of the SPV capitalize the vehicle through share capital.
3. The SPV then raises the remainder of the funding requirement (senior debt) from financial institutions such as banks or through the capital markets.
4. The SPV enters into arms length contracts for the delivery of the key outputs of the project, typically construction, operations and in some cases, Medical Equipment or IT.

Typically, these projects are funded on a project finance basis with highly geared long term funding and where senior funders generally only have recourse to the cashflows of the project. This means that in the event of a project collapsing, senior lenders may not be repaid in full. This requires

lenders to understand the nature of the projects risks as well as the wider political and economic environment.

### *Mixed Infrastructure and Service Model*

Projects which require both the long term delivery of buildings and clinical services differ in structure due to the fact that to date, senior funders have been unable to provide low cost project finance debt into projects where they are exposed to clinical risk. There aren't many examples of such projects but those that have successfully closed, have adapted existing structures to make them fundable. One such example is set out below.



Under this structure, although the public sector only enters into a single contract, that contract is entered into by two SPVs as set out above. Practically all of the funding and certainly all senior debt is injected into the InfraCo SPV. This SPV has the obligation to construct the asset and is also responsible for the on-going maintenance and the provision of Facilities Management (FM) services such as cleaning, throughout the life of the contract. The other SPV, ClinCo, is largely responsible for providing the clinical services during the life of the contract. In some examples, the length of the contract may vary between the two SPVs, where ClinCo may have a shorter contract period. This structure has been successfully implemented on the Turks and Caicos Islands project and on the Cascais Hospital project in Portugal.

Crucially, failure arising from ClinCo actions, can only lead to termination of the ClinCo SPV, thus providing the protection to lenders referred to earlier.

Without such protection, Project Finance type funding is unlikely to be made available.

The two examples cited above focus on those projects which require the delivery of new infrastructure, which this paper mainly focuses on. However, there are examples such as the UK's Independent Treatment Centre (ITC) programme, where structures have been developed to deliver short term (five-year) contracts aimed at providing additional capacity for elective surgery. These are more akin to outsourcing contracts and in most cases do not require large amounts of private finance, given the modest infrastructure requirements.

## 2 Financing Characteristics

In this section, we will look at the types of finance typically available, the issues which are important to the various providers of finance and the availability of such finance.

### 2.1 Types of Finance available

For the purposes of this paper, we are focusing on long term contracts requiring significant investment in infrastructure and we will therefore focus on the types of finance typically seen in these projects.

In the early days of PPPs, it was recognised that to maximise the benefit of these projects, the private sector needed to manage those risks which it was best placed to manage and it was felt that the inclusion of private finance brought some additional benefits including<sup>3</sup> the following:

- *Improved whole-of-life risk allocation and management*

The general experience is that the public sector has benefited from the detailed analysis, allocation and management of project risks brought about by the providers of private finance.

- *Greater focus on due diligence*

Senior debt providers have played a crucial role in contract structures and the delivery solutions making sure projects are well defined and appropriately structured.

- *Better integration of design, construction and operational skills*

The fact that the public sector pays for a serviced facility over the life of the contract has meant that the integration of the various components (construction, maintenance and other services) has become important to funders. Without successfully integrating these various components, they are at risk of increased costs or poor performance.

### *Equity*

Equity is often referred to as risk capital because it is the primary bearer of risk out of all the different types of financing. Because it is subordinated to senior debt, equity will only be paid out once all other costs have been met. Where the SPV has failed to control its costs or where it has performed badly, it may leave itself in the position where it is unable to pay its equity holders any dividends. Conversely, where it is efficient and is able to deliver the contract requirements at a lower cost, it can expect to achieve higher than anticipated returns on its equity investment. Equity holders focus on enhancing profit to maximise their return.

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<sup>3</sup> The Value of PFI: Hanging in the balance (sheet?) – PricewaterhouseCoopers 2008



Typically, the equity investment in these types of projects can account for anything from 8% to 25% of the total funding requirement. In developed markets such as the UK, it is around 8% to 10%. Equity is typically made up of share capital (often referred to as pinpoint equity) and subordinated loans from shareholders which attract a fixed rate of interest.

Equity returns can vary from sector to sector and between countries, but generally you would expect to see returns of 12% to 15%, with complex and risky projects sometimes requiring a higher return.

### *Debt Finance*

Debt finance will always make up the largest and cheapest component of private finance in PPP projects and will have first call on the cashflows of the project before the equity providers. Equally, in the event of a project defaulting, debt providers have first call on the assets of the SPV. Debt providers are primarily concerned with ensuring interest and principal payments are made over the life of the loan and, unlike equity holders, are not concerned with profit enhancement. Project Finance is often referred to as no recourse or limited recourse finance because the funders only have recourse to the cashflows of the project and not to the parent companies of the SPV shareholders.

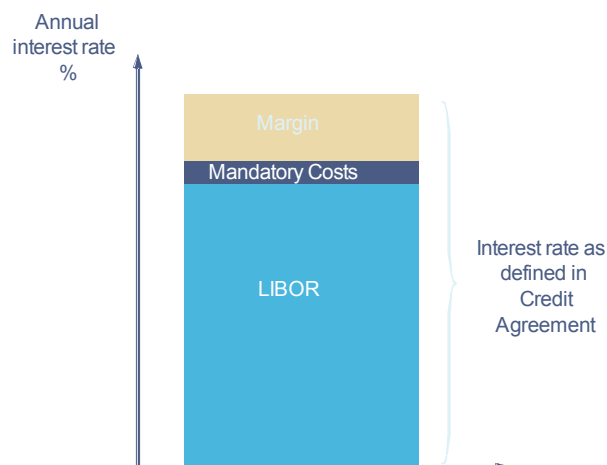
In well developed financial markets, debt finance can be provided either through commercial bank loans or through finance raised in the capital markets through the issuing of project bonds.

Some key characteristics of bank loans include:

- For large loans, one or more “arranging” bank appointed
- Arranging banks will normally underwrite the loan and then syndicate (sell a proportion to other banks) post financial close. In some cases, syndication can occur before financial close.
- Credit committee will consider
  - Underlying risks of proposition
  - Proposed return or margin
  - The ability to reduce exposure by syndication

Bank loans are typically priced by reference to an underlying instrument, such as the London Interbank Offered Rate (LIBOR), with a premium which reflects the risk banks are taking on being added to that as a margin. Normally, banks will differentiate between the construction and operational phases of a project and will apply different margins to each. The diagram below shows the pricing mechanism more clearly:

## Pricing Bank Debt<sup>4</sup>



LIBOR refers to the rate at which banks will lend to each other at various short term maturities. Mandatory costs refer to regulatory requirements for banks to set aside capital when they make loans.

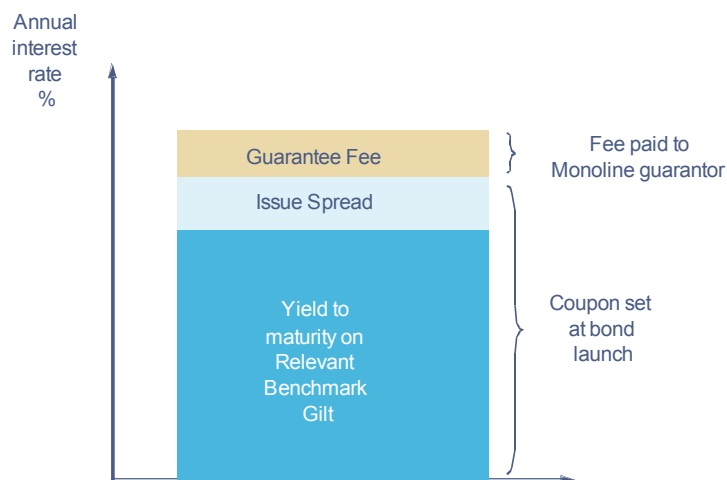
Bond financing has become increasingly popular over the last few years to fund large infrastructure projects, as pension funds have sought to match their long term liabilities with equally long term cashflows (through receipt of interest payments on PPP bonds). Some key characteristics of bond financing are:

- Commonly issued by governments and corporates
- Pays the holder a coupon
- Often a tradeable/listed product
- Will require a credit rating
- Bonds can be fixed rate or index linked
- Principal and coupon payments often guaranteed by AAA rated monoline insurer, thus allowing the bonds to be AAA rated (resulting in lower cost)

## Pricing a Bond<sup>5</sup>

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<sup>4</sup> Enhancing your Commercial and Financial skills – PwC course material - 2007



Bonds are priced by reference to a benchmark Gilt (government issued bonds). Investors then consider what additional margin over and above the yield on the benchmark gilt they want as compensation for the additional risk they are taking. This is known as the Issue Spread and is set immediately prior to launching the bonds. Additionally, for those bonds guaranteed by a monoline, there is a fee payable for that guarantee. The cost of the guarantee is normally offset by the fact that an AAA rating (provided by the guarantor) is seen as a safer investment and therefore investors will accept a lower Issue Spread.

### *Availability of Finance*

In the developed world, there is a strong appetite from capital markets to invest in what are considered relatively low risk, high return infrastructure projects. In 2007, \$246.5bn in debt was raised to finance major infrastructure projects internationally. Of this, \$44.5bn was attributable to the Americas, \$44.8bn to Asia Pacific and \$130.7bn to EMEA which was up by one third from 2006. Part of this growth was driven by African markets. African project finance volumes doubled in 2007 to \$9.2bn. This was helped by the mega Ambatovy financing in Madagascar, of \$2.1bn, but there was strong growth elsewhere in mining and energy, with Nigeria showing a strong performance<sup>6</sup>.

It appears that major PPPs in Africa and investment in infrastructure remain in the extractive resources and energy industries. How to transfer this growth trend into the realm of social infrastructure remains the challenge.

<sup>5</sup> Enhancing your Commercial and Financial skills – PwC course material - 2007

<sup>6</sup> Private Finance International

There continues to be a lack of international investors showing much interest in the social infrastructure sector, both in terms of commercial banks prepared to lend into some of those countries as well as the general lack of third party equity available for investment. Where available, the terms on which that funding is made available will not match the terms we have seen in some of the more developed markets. The differing risk profiles will be reflected in the following:

- **Debt to equity ratio** – this is often referred to as a project’s level of gearing and shows the levels of debt and equity as proportions of the total funding requirement. In developed countries, you would expect to see a structure of around 90:10. In developing countries, considerably more equity is likely to be required. This will not just put additional burden on the equity market, but also push up the costs of the transactions. Where developing countries have access to strong banks in neighbouring countries, such as South Africa, this may problem may not be as acute.
- **Buffer between payment received and debt service** – the payment made to the project company by the public sector will need to cover all of the operational costs of the project as well as repaying the debt and if there is any spare cash, to pay dividends to the shareholders. Banks will have an interest in how much spare cash is available after making the required debt repayment, to deal with any situation where the project company is unable to make its debt repayment due to higher costs or poor performance. This is referred to as the Debt Service Cover Ratio (i.e. how many times greater than the debt repayment is the cash available to make that payment). High cover ratios will be required where there is a perceived higher risk either attributable to the public sector or indeed to the private sector players charged with delivering the contract. Once debt repayments have been made, there is no other use for the spare cash other than as distributions to shareholders. So, high cover ratios will typically also lead to increased equity returns.
- **Funding margins** – as indicated earlier, the margins attached to a loan are the result of a bank’s assessment of its risk and rewards. Where there is a perception of greater risk, whether it be public sector credit risk or some other factor, funders will expect to charge a higher premium. The differences in these can be substantial (in some cases over 100% higher) which can have a significant impact on project economics and affordability.

In the next section we will look at some of the conditions which will influence both the availability of finance and international sponsor interest.

### **3 Key Issues in Structuring Successful Projects**

There are many variables which impact on this and we will look at some of these below:

#### **3.1 Political risk**

There are two main types of political risk which may hamper the development of PPP structures due to their affect on the willingness of sponsors and funders to enter into those types of deals. As a general rule, given the long term nature of most PPP deals, it is critically important that there is a reasonable level of political stability in the country concerned. This is not always the case in developing countries and can be a major barrier to attracting private sector investment.

There is the also the general credit risk (evidenced through sovereign credit ratings) which both providers of debt and equity will have a concern about in developing countries (country risk). Again, given the long term revenue commitments expected from the public sector, funders will carefully analyse the likelihood of government defaulting on its commitments. The financial risks relate not just to the on-going revenue stream required to pay for the project, but also the financial consequences of the public sector's share of the risks it takes on. These circumstances are quite likely to be present to a lesser or greater extent in many developing countries. In these cases, there is a role which can be played by Donor organisations and Multilateral Development Banks (MDBs), either through the provision of revenue support, thus taking away some of the credit risk, or through guarantees (through The Multilateral Investment Guarantee Agency (MIGA) for instance), in effect stepping into to the shoes of the public sector to make payments in the event of default.

#### **3.2 Capacity of private sector – Banking**

One of the reasons PPPs have been successful in developed economies is that the funding markets and commercial banks in particular have been sufficiently mature to understand the risks of these projects and to respond to them in a competitive manner. Evidence suggests that in many developing countries, it is very difficult or impossible to attract interest from commercial banks when it comes to investing in social infrastructure such as schools and hospitals. Where possible, local and regional banks should be encouraged to participate in PPP projects in developing countries. They should also be given the opportunity to feed views into any early discussions on the use of PPP structures. International banks that do not have country exposure are unlikely to be keen investors unless there is strong deal flow and the fundamentals of political stability are in place.

The lack of corporate bond markets further narrow the range of financing options available to developing countries.

In the absence of a strong commercial bank sector and a lack of access to capital markets; countries, donor agencies and MDBs need to consider how external support, whether given by aid or loans, can be used to support long

term infrastructure projects such as PPPs. This support can be in the manner described above or in the case of MDBs, might be through the provision of low cost loans directly into the SPV, with the public sector getting the benefit of the cheaper financing. The IFC's experience of funding private sector projects through its Global Infrastructure Project Development Fund<sup>7</sup> is an example of such a provision.

The IFC can also play a key role in building local banking capacity by working with local banks and providing assistance to strengthen those institutions to play a more active role in financing infrastructure projects.

### **3.3 Capacity of private sector – Sponsors**

Successful PPP programmes require there to be a strong pool of private sector market participants willing to engage with the public sector in delivering these complex procurements. This capacity needs to address both the delivery aspect of PPPs, such as building contractors, service providers, etc. and the financing aspects. On the delivery side, capacity can either be delivered through local players where those exist, or through international players.

It is difficult to attract international builders and service providers into a market unless they can see a long term opportunity which will make the initial investment worthwhile. This means that a pipeline of deals, with strong political commitment to delivering them, plays a crucial part in attracting and building delivery capacity. Where there is a strong local presence, it is likely that those players would not have had previous PPP experience and will not therefore be used to dealing with the types of risks inherent in PPP contracts. For instance, building contractors may not be used to taking delay risk backed by liquidated damages. Equally, they may find it difficult to provide the appropriate guarantees. In developing countries therefore, there is likely to be a need for governments and other agencies to consider ways in which it can support the strengthening of the provider base.

One of the key challenges remains the attraction of equity investors, and particularly third party equity, due to the higher level of risk associated with this type of funding. Additionally, equity investors will at some point seek to recycle their investment by selling their equity in completed projects and use the cash to invest in new projects. In the UK and other developed countries, there are now established markets that allow exit routes from a particular investment and there are many infrastructure funds who find these long term investments attractive. These mechanisms may develop over time in other markets but that will require a sustainable long term deal flow.

In the meantime, other ways of allowing for the recycling of equity will need to be considered.

### **3.4 Legal and Regulatory framework**

Before embarking on a PPP programme, each country must carefully consider the legislative requirements of such a programme to ensure that the

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<sup>7</sup> Minutes of Meeting of the Board of Directors of IFC, September 27, 2007

appropriate legal and regulatory framework is in place. Without the appropriate framework, investors will not consider participating in such a programme. There are many issues which will need to be considered for any country contemplating PPPs, some of which may not be immediately obvious and include:

- Concessions law
- Jurisdiction – Federal/State/Local government
- Foreign investment legislation
- Taxation
- Environmental law
- Land and planning laws
- Regulatory standards on construction and service provision
- Arbitration system

### **3.5 Economic stability**

In developed countries, the private sector actually sees opportunities when there is an economic downturn as it usually means that governments are raising less revenue through taxation and public sector spending comes under pressure. However, in developing countries where international finance and sponsor capacity is required, economic instability will lead to further nervousness about market entry. Unstable developing countries therefore, are likely to require more external support to develop PPP projects successfully.

Stability also plays a significant part in the long term affordability of PPP projects in developing countries. In most cases, the infrastructure delivered by PPP is likely to be new capacity and as such, is likely to represent an additional cost to either government or users. Bidders will be concerned about a government's ability to meet these costs in the future, where there is not a track record of stability.

### **3.6 Public sector skills**

The level of skill and expertise required when contemplating entering into a PPP procurement, is substantial and often underestimated, which leaves most public sector bodies with a serious skills deficit. At governmental level, there is a need to ensure the appropriate government institutions and processes are in place and are robust. At a project level, the public sector needs delivery skills which are difficult to come by and retain. Typically, the skills which are in short supply at project level include:

- Project Management
- Financial and funding skills

- Procurement expertise
- Commercial skills
- Technical skills

Without these skills, it is almost impossible to deliver a successful project which is both a sustainable investment and good value for money. In many cases, the public sector deals with these shortcomings by employing a raft of advisers to carry out the various roles. It can never make sense for the public sector to absolve itself of responsibility by allowing or expecting advisers to make decisions on their behalf. This invariably leads to a poor understanding of the deal post close and little or no buy in. There is a balance to be struck between the appropriate and important use of advisers, who of course, will bring expertise and experience not available in the public sector, and having qualified and experienced public sector employees making informed decisions and securing wider buy in to the project. A key function of any good adviser is to ensure that knowledge is shared and skills are transferred to the public sector.

Clearly, these skills and experience can only be developed over time and only where a country has sufficient deal flow to allow for that experience to be recycled. Some countries, such as South Africa, UK and Canada, have set up central bodies whose role it is to coordinate all PPP activity in the country, develop policy and disseminate good practice and standardised approaches to procurement and contracts. In developing countries, bodies such as the World Bank or IFC could provide some of this expertise, either directly or through well defined and short term advisory contracts. The case study on the South African PPP Unit later in this paper, illustrate some of these points.

It should also be noted that the implementation phase of any complex project is extremely important and should have the same level of rigour and expertise applied to it as the procurement process. In our experience, this is not usually the case.

### **3.7 Procurement Process**

PPP procurements are lengthy and expensive processes. Even accepting that the UK experience is not necessarily best practice, any hospital procurement will take a considerable amount of time and will require a huge amount of resource from both the public and private sectors. A losing bidder may spend £2m to £3m on a typical UK health project, with much of this cost attributable to design work and the cost of running a procurement team. The cost of bidding is not necessarily proportionate to the size of project, so even smaller projects incur substantial bidding costs.

High bid costs can be a major barrier to attracting a strong competitive field. Governments and other agencies will need to consider ways of reducing these costs by designing an efficient and transparent procurement process which engenders confidence and where bidders can see that their efforts and costs are being expended appropriately. Decision making points need to be



clearly signposted and robust and transparent evaluation methodologies need to be in place.

In some circumstances, governments may need to consider compensating losing bidders for at least some of their bid costs in order to attract sufficient competition and to pump prime the development of the market. Careful consideration would be needed to make sure this did not create perverse incentives. Funding for such initiatives could be supported by MDBs or donor organisations.

### **3.8 Attracting strong competition**

All of the points discussed above in this section will impact on a developing country's ability to attract strong competition for PPP projects. Without strong competition, it is unlikely that projects will deliver value for money or deliver the innovation and improvement in healthcare infrastructure. All of the points discussed will be considered by each bidder prior to reaching a decision on whether they would bid for any project.

The single most important factor impacting on whether developing countries can attract strong competition is whether potential bidders feel that the process is fair and transparent and therefore whether they feel confident that they have a fair chance of winning. Concerns about inappropriate relationships between government and specific companies will have a major impact on the public sector's ability to structure a competitive procurement process.

## 4 Key Commercial Issues

This section looks at some of the key commercial issues which all PPP projects will need to confront. They apply both to developing countries and to developed countries, although some of them may raise specific issues in developing countries. Where they do, this will be highlighted.

### 4.1 Defining the scope

The most important element of any PPP procurement is also the most obvious one. The scope of any project is important because it forces the public sector to think about what it wants in sufficient detail to specify its requirements to the private sector bidders. If there are elements of the scope that are unclear, this will result in bidders interpreting requirements differently, submitting bids that are difficult to evaluate and potentially delivering the wrong solutions.

Time spent at the outset thinking through scope issues and providing as much clarity and certainty as possible will make the competitive procurement process run much more smoothly and therefore more quickly, and is likely to deliver better value and a better solution.

As part of the scoping discussions, the public sector needs to consider what its objectives are and how it wants them delivered. For instance, is the project merely about infrastructure or does the public sector want to see an increase in its own capacity over the life of the project, so that at the end of the contract, the public sector has some skills that may broaden its options going forward.

An ill defined project is likely to be received negatively by bidders who will question whether they are prepared to invest scarce resources in bidding for such a project. They are also likely to make assumptions about the public sector's ability to run the process based on that initial view, and again, may decide to invest their resources elsewhere.

### 4.2 Payment and Performance Systems

The key contractual lever by which the public sector incentivises the private sector (or not) is the payment and performance system. Typically, payment mechanisms are either based on User Fees, such as road tolls or energy tariffs, or they are based on Availability and Performance of the infrastructure and related services. Social infrastructure such as hospitals is typically Availability. In these models, the public sector defines some performance criteria for the facility and the services provided and where these criteria are not met, financial penalties are levied against the SPV. Typically, areas of the hospital are weighted to recognise that some areas are more important than others, and therefore a failure in those areas will attract a larger penalty.

Financial penalties should be set at a level which incentivises the private sector to rectify a fault. It should not aim to compensate for the public sector's potential loss arising from the failure.

Performance systems are usually based on service specifications with detailed performance criteria which are largely self-measured by the SPV with the public sector body having the ability to audit the monitoring systems and the levels of service.

Key features to bear in mind when considering a payment mechanism are:

- Drives value for money
- Incentivises performance
- Simple to understand and practical to operate
- Equitable
- Measurable

Funders are very sensitive to payment mechanisms and will spend a considerable amount of time looking at how sensitive the payment stream is to payment deductions. Overly aggressive mechanisms are unlikely to be accepted by funders.

#### **4.3 Contract default and Termination Issues**

Given the length of these contracts, there is always the possibility of things going wrong or of the public sector deciding that it wants to terminate the agreement. The contract recognises therefore, that in certain situations, either party has breached the contract in such a major way that they are in default. If that default is not rectified within a specified time, the other party can then terminate the project. There are also certain circumstances where an event which is neither party's fault, occurs and impacts on the project to such an extent, that either party can terminate the agreement. The main default scenarios are:

- Authority Default – where the public sector has breached one of its default provisions (e.g. not paying the SPV).
- SPV Default – where the private sector SPV or one of its sub-contractors is at fault.
- Force Majeure – an exceptional event which neither party is responsible for.

Termination of course, is a major event and brings with it major consequences. Regardless of the type of default, termination will usually lead to some level of compensation being paid to the SPV (and banks). This is because if the public sector did not pay any compensation on SPV default for instance, they would be in a windfall position, with a newly constructed asset (or part thereof) for which it had not paid.

The contract therefore caters for a range of termination scenarios (as above) and sets out the basis on which compensation is payable depending on the type of default.

In most cases, these amounts will be substantial and developing countries in particular, should consider their ability to make such payments in the event of termination.

#### **4.4 Change Mechanisms**

In a healthcare environment especially, there is constant change and most plans are out of date by the time they are implemented. One of the criticisms of PPPs is that long term contracts do not provide sufficient flexibility to deal with such rapid change and that although the contracts have change mechanisms to deal with the need to change, they are cumbersome and expensive.

Some of this criticism is probably fair, and more work can and should be done to improve Change provisions in PPP contracts to make them less cumbersome and more responsive. It should be noted of course, that whether you build a hospital with traditional public funds or with private finance, you are building a structure that is largely fixed, has a very long life and is not very flexible to major change.

Care should be taken therefore to consider the likely future needs of the facility and where possible, allow for that in the design. This is particularly true with some of the high tech areas of a hospital such as operating theatres.

## 5 Case Studies

The case studies below provide some examples of the range of PPPs which are being carried out in low to middle income countries. Not all are based on the delivery of infrastructure, some focus on building service capacity, but nonetheless are hopefully useful to illustrate what can be achieved. They have been chosen to illustrate how some of these countries have dealt with some of the issues raised throughout this paper.

### 5.1 Funding

#### **Sofia Water and Wastewater Concession Project - Bulgaria**

The Sofia Water and Wastewater Concession Project highlights the value of the European Bank for Reconstruction and Development (EBRD) in financing capital investment as offers from commercial banks were unforthcoming at bid stage in offering affordable long tenor debt facilities. For the first five years of the 25-year concession the EBRD provided a 15-year senior debt facility on a limited recourse basis of up to E32m and International Water Limited (IWL) provided E20m in equity and quasi-equity. As Bulgaria's first project funded by limited recourse finance, thorough negotiation was required to ensure financing arrangements complied with local law including conditions for intervention in the event of default.

#### **South Africa: Inkosi Albert Luthuli Hospital**

Government contributions of 10% were made in the Inkosi Albert Luthuli hospital PPP deal closed in 2002 and can be an effective means of managing the affordability of the unitary charge. The publically funded Albert Luthuli hospital contracted with the private sector Impilo consortium to provide medical and IT equipment and facilities management over a 15-year concession period. The hospital had been built by the regional government of KwaZulu-Natal, to replace three existing old hospitals with a new 850 bed facility to serve a population of approximately 8 million. The Government had not been able, due to budget constraints, to fund the medical equipment or the IT requirements. It had decided therefore, to launch a PPP procurement as a way of securing the initial funding and transfer the on-going lifecycle risks. The winning consortium was made up of local companies and included major international companies such as Siemens (Medical Equipment) and Drake & Skull (FM service providers).

Alongside the 10% government contribution, debt and equity provided 70% and 20% of the funding respectively. The debt was in the form of a RND 300m 7-year loan from the Rand Merchant Bank and a 15-year EUR 220m currency swap facility. The Inkosi Albert Luthuli project was both the first PPP health deal in South Africa and the first closed deal under the new treasury regulations of the Public Finance Management Act (PFMA). However despite its evident success a number of issues/problems have still emerged:

- As part of the funding structure the RND was hedged against the USD at RND 13/ US \$1 (approx) to manage the health authority's foreign exchange exposure. This exposure related to the future purchase of Medical Equipment, priced in US\$. It was felt that private sector hedging would not deliver value for money and the government therefore decided to retain this risk.
- The Albert Luthuli Hospital is perceived to be state of the art and very expensive. The Government is questioning whether this is appropriate to South African health needs.
- The hospital is running at 60% capacity but the provincial government is paying for full capacity. Reasons for this include an inefficient referrals system (the Albert Luthuli is a tertiary facility) and the location; it is not close to any other regional and district hospitals.

This case study illustrates that the PPP was successful when measured in terms of a competitive process, deemed to deliver value for money, which attracted private finance and which reached financial close. The private sector has delivered what it was asked to deliver. The questions of whether the facility is too large or too highly specified, might illustrate the public sector's ability to plan strategically for healthcare and in all likelihood, would have been evident regardless of whether there had been a PPP. Problems of size, range of services and utilisation, are rarely problems brought about by the PPP structure itself.

## **5.2 Legal and regulatory environment**

### **South Africa's National Treasury PPP Unit**

#### ***A failure***

In 2000 the South African Government mandated two consortia with the designing, building, operating and financing of two maximum security prisons in Bloemfontein and Louis Trichardt on 25-year concession contracts. The facilities were to hold about 3,000 inmates each and became fully operational in 2002 at a cost of approximately \$245 million (Bloemfontein) and \$259 million (Louis Trichardt). Despite operating costs being similar to those of the public sector the specifications for design and functioning were based on the high level requirements of UK prisons and not on a South African affordability assessment or feasibility study. A South Africa Treasury official was reported to have commented at a conference that, 'we ordered a Rolls Royce when we should have ordered a Toyota.' High levels of anticipated risk also resulted in commitment to expensive unitary charges with guaranteed returns to the consortia, Group 4 and Wackenhut Corrections Corporation, of 25% and 29.9% respectively.<sup>8</sup>

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<sup>8</sup> 'South Africa: Perpetuating the Myths', Prison Privatisation Report International, No 58, October 2003, Published by the Public Services International Research Unit (PSIRU) University of Greenwich, London, England, <http://www.psiu.org/justice/ppri58.asp>

### ***A legal and regulatory framework to avoid future failure***

The dedicated PPP unit in the South African National Treasury was set up in 2000 to manage PPPs and to ensure that the criteria of affordability, value for money and risk transfer were effectively assessed both prior and throughout the process of procuring private sector services. The Public Finance Management Act (PFMA) and The Municipal Finance Management Act (MFMA) were also passed to establish a legislative framework for both national and provincial, and municipal governments respectively. Practical documents developed on the basis of this legislation are available on the PPP Unit's website. A legal document provides standardised PPP provisions and offers a template for a typical PPP agreement with the objective of 'creating certainty, uniformity and predictability in the market, as well as reducing transaction time and costs'.<sup>9</sup> A more procedural PPP manual sets out guidelines, 'rigorous' risk assessment standards and 'procedural clarity' for conducting successful PPPs.<sup>10</sup> PPPs now also require approval from the PPP Unit at three separate stages in their process, including feasibility, procurement and final deal negotiation. Each PPP sector is represented by a different PPP Unit representative and it is not uncommon for these representatives to sit in on deal negotiations, allowing the development and conveyance of a strong technical knowledge base. Despite increasing bureaucracy the processes introduced have not become unnecessarily bureaucratic. PPP Units have been rolled out in some regions allowing the approval process to be managed at provincial level and the national unit to be relied upon for technical advice only.

In addition to the strong organisation and political commitment evident in the **Sofia Water and Wastewater Concession Project**, the regulatory framework installed was a key driver in its success. Since Bulgaria had no water regulatory body the concession contract was written with 'regulation by contract'. This output focussed contract defined stringent service levels with clearly stated target dates and incentivising performance goals. Compliance with the contract was also ensured by the creation of an independent Concession Monitoring Unit (CMU). A successful regulatory framework for PPPs must also be forward looking and in the Sofia example any tariff adjustments and a scheduled review of tariffs undertaken in the third year of the concession, required CMU review and approval.

### **Government Commitment and Public Sector Skills**

A key factor in the success of the **Sofia Water and Wastewater Concession Project** was the commitment of the municipality of Sofia. The transaction was both the first water privatisation and major municipal infrastructure concession in Bulgaria and one of the first water concessions to be financed on a limited

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<sup>9</sup> [http://www.ppp.gov.za/Documents/ppp\\_provisions/Standardised%20PPP%20Provisions.Covering%20letter%200040420.pdf](http://www.ppp.gov.za/Documents/ppp_provisions/Standardised%20PPP%20Provisions.Covering%20letter%200040420.pdf)

<sup>10</sup> <http://www.ppp.gov.za/Documents/Manual/Main%20Intro+Contents.pdf>

recourse basis in Eastern Europe. Its successful completion in October 2000 followed an earlier failed attempt at privatisation in 1996. In addition to the revenue potential of Sofia's 1.2 million population resident in a defined service area, John Gibbs at PwC claims that 'the project was driven by the municipality of Sofia's clear objective to provide improved services to consumers through the introduction of private-sector management techniques, operational expertise and capital; addressing a backlog of under-investment and ensuring a standard of service delivery appropriate to the 21<sup>st</sup> century'.<sup>11</sup> The importance of the municipality's organisation and commitment to the project was demonstrated in a number of aspects of the deal:

- The ease of the project's progress was made possible by the clear and absolute control held by the municipal 'owner' of the project.
- The municipality created a 'Tender Commission' before the deal was in progress to work with advisors in writing thorough contract documents and to guide the deal's development. A significant amount of time was devoted to the comprehension of the major issues by the Commission, resulting in an effective and operative contract on which basis the tenders were submitted.
- The Tender Commission and municipality formed strong constructive relationships with their advisors (consisting of PricewaterhouseCoopers (project management and financial advisory), CMS Cameron McKenna (international legal advisers), Legacom (local legal advisers) and Hyder Consulting Ltd (technical advisers) and these advisors were appointed by the municipality and EBRD via a robust competitive process attracting 20 consortia from across the world. The ease of co-ordination between involved parties was further enhanced with the engagement of Eurolex Bulgaria (Pte) Ltd as internal project managers.
- The municipality worked successfully with the EBRD who assisted in enforcing un-biased open processes including that of bid evaluation. (The EBRD also offered senior credit facilities to bidders on a limited recourse basis and when the preferred bidder, Sofisjka Voda AD, was selected the municipality effectively managed to continue receiving advice from the EBRD on a 'good office' basis while allowing it to act as a potential credit lender.)
- The municipality and its advisors' careful planning, in undertaking a feasibility study of the concession structure, a legal review (resulting in an amendment of procurement and property law) and technical studies which were made available to bidders guaranteed the project's ability to obtain the finance required while keeping customer prices affordable.
- To appease political concerns the municipality held a minority shareholding and limited representation (at director and board level) in the SPV created, while allowing the majority of control to transfer to the private sector.

## South Africa PPP Unit

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<sup>11</sup> J Gibbs, 'Case Study: Sofia Water', Privatisation International [www.acquisitions-monthly.com](http://www.acquisitions-monthly.com), February 2001, p23-25.



The creation of the South Africa dedicated PPP Unit in the National Treasury demonstrates strong commitment to the success of the PPP model. Incentives to encourage similar commitment in the provinces have also been introduced, including the guaranteed payment of transaction advisory fees once a project has passed its feasibility study. The fees are paid from the national to the provincial government and are recouped by the private sector partner via the unitary charge.

### **5.3 Procurement Process/Attracting strong competition**

#### **Sofia Water and Wastewater Concession**

The Sofia Water and Wastewater Concession Project transaction was conducted by a phased process planned to attract strong international interest and competition. Eight Pre-Qualification Questionnaires (PQQs) were submitted with four consortia invited to submit further detailed solutions via a two way process of bid review and bidder comment on a draft contract. Final bids included a letter from each bidder confirming acceptance of the contract without material amendment. Not only did this process give the municipality a strong negotiating position ensuring risk transfer to the private sector but it meant that the final bids could be compared on the basis of price as the key variable. Sofisjka Voda AD (International Water Ltd) was subsequently awarded the contract on the basis of a 'highly competitive bid that required a tariff increase of only 15% in real terms with no municipal subsidy or guarantees.'<sup>12</sup>

### **5.4 Risk transfer and effective negotiation**

#### **Chris Hani Hospital Baragwanath (CHB)**

Where projects involve working with or rebuilding existing infrastructure the maintenance of old, dysfunctional and poorly maintained facilities can prove problematic and can result in the private sector taking on additional risk and requiring an increased unitary charge.

The Chris Hani Baragwanath (CHB) hospital was developed over more than half a century and has approximately 2,544 active beds, excluding 307 cribs, 82 lodger beds and 130 transitional beds. It is arranged over 429 widely dispersed buildings covering 233,785m<sup>2</sup> of the 173 acres site. The condition of the dilapidated sometimes leaking buildings increases the risk and cost of this re-build PPP project, which is planned to take place over approximately 33 complex phases of decanting patients around the site while co-ordinating construction. The project's core objective is the reconstruction and upgrade of CHB hospital facilities in order to transform the hospital into a specialist referral centre. It will still handle some level 2 medical services, but will be

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<sup>12</sup> J Gibbs, 'Case Study: Sofia Water', Privatisation International [www.acquisitions-monthly.com](http://www.acquisitions-monthly.com), February 2001, p23-25.

supported by the building and/or upgrade of satellite District Hospitals to handle the high volume of level 1 and some level 2 medical services. The proposed plan envisages CHB's capacity being reduced to approximately 1200 beds with the primary health care beds being relocated to the planned District Hospitals.

According to the South African Gauteng Treasury, 'this will result in primary health care being more readily available where it is needed as well as an improvement in the quality and standard of the higher level medical care provided by Baragwanath Hospital, while ensuring greater cost effectiveness in the health care deliver system.'<sup>13</sup>

The provincial government has completed a feasibility study with its advisors, PwC, for the project which would be the largest project financed deal to date in South Africa. Following the feasibility study the provincial government has requested contributions from the national government as the existing budget is reportedly insufficient to cover the ongoing estimated unitary charge. Currently the provincial government and its advisors are in discussion on a number of further national treasury clarification questions. It is currently expected that the deal will go to market some time between April and June 2008.

The condition of existing infrastructure is a common problem in South Africa as the provinces annual maintenance spending is only around 1% of the recommended 3% of the replacement value of building stock. Social risks can also exist that cannot be transferred to private sector partners. In the CHB project, socio-economic conditions in the area surrounding the hospital and high crime rates increase the risk of incidents on site. A medical student moving between buildings was raped and a patient was also shot on site in 2007. Linen must also be brought by patients to the hospital to avoid theft. The political risk of undertaking projects is also significant; there is a huge disparity between private and public sector hospitals and politically, it is difficult to justify improving conditions at the CHB hospital and not other similarly-deprived hospitals. This issue is compounded by the public's perception of the high cost of PPPs.

## **5.5 Payment Structures**

The case studies below show some of the payment structures which can be utilised, particularly where user fees are the norm. It should be noted however, that user fees can be difficult to afford for the poorest members of the population.

### **Yashaswini Health Insurance Scheme**

Non-infrastructure PPPs have been used with some success to provide access to affordable healthcare for the Indian rural poor. The Yashaswini health insurance scheme, launched in the Indian state of Karnataka in June 2003, was the first attempt to provide low cost insurance cover to members of

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<sup>13</sup> <http://www.treasury.gpg.gov.za/ppp.html>, accessed on 26/03/08.

farmers' co-operatives. It is structured so that for every Rs60 premium paid a government contribution of Rs30 per annum is supplemented, making healthcare insurance affordable to farmers who previously had no such access. The health insurance package covers surgical operations and related outpatient services, including those pertaining to existing conditions, and all OPD consultation, diagnosis and non-surgical treatment are at subsidised rates in case surgery is not required. This innovative structure benefits the government in ensuring that the poorest of the poor have access to insurance while also allowing the hospitals to increase their revenues by opening up the market base. According to the Karnataka Human Development report 2005, about 86,000 free out-patient consultations and 24,122 surgeries have been conducted during 2003-04 and 2004-05 and a payment of about Rs.28.56 crore<sup>14</sup> has been made to the 164 designated network hospitals as fees for cost of treatment.<sup>15</sup>

In recognition of the scheme's success other public private healthcare insurance schemes have followed, including another private initiative, Arogya Raksha Yojana, which is a more comprehensive health insurance scheme that as well as surgical operations, offers hospitalisation, free medical consultations and low cost medicines for Rs180 per annum. Arogya Raksha Yojana has also been mandated to manage and operate PHCs on existing government budgetary support in order to improve efficiency by linking primary healthcare organisation to the insurance programme.

### **Pamir Energy, Tajikistan**

With the collapse of the former Soviet Union, conditions in the mountainous eastern Pamir region of Tajikistan deteriorated dramatically. Electricity infrastructure quickly fell into an advanced state of disrepair and power plants and many distribution lines were destroyed during the civil war in 1992. At that time, Tajikistan's estimated per capita income was around US\$ 160/year and 60 to 80 percent of people were living below the poverty line and relying on subsistence agriculture. Those that did have access to electricity were used to paying 0.4¢ per kW/h, less than one-tenth of the production cost. Under these conditions, attracting private sector investment into the energy sector with traditional approaches would have been difficult at best. Pamir Energy Company operates under a 25-year concession contract to operate the electrical utility assets in the Pamir region, improve transmission infrastructure and hydro generation capacity, and regulate the level of Lake Yashilkul to ensure adequate water flows in winter. Pamir Energy also assumed responsibility for the utility's 30,000 existing customers and 595 employees.

Pamir Energy, jointly owned by AKFED and IFC, with equity of 70% and 30% respectively, was established in 2002. The Aga Khan Fund for Economic Development (AKFED) has invested US\$8 million in equity and the IFC has committed US\$3.5 million in equity and US\$4.5 million as debt. A key aspect of the project is the social protection scheme that ensures that tariffs paid by

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<sup>14</sup> 1 crore = Rs 10 million

<sup>15</sup> Karnataka Human Development Report 2005, p145

households remain affordable, while the tariffs received by the investors provide a rate of return commensurate with the risks involved in such a project. The World Bank's International Development Agency (IDA) loaned US\$10 million to the Government of Tajikistan at a rate of 0.75%. These funds are on-lent to Pamir Energy at 6% allowing Pamir Energy to partially finance its capital investments at less than commercial terms and pass these savings on to customers as lower tariff rates. This 5.25% lending margin, plus a US\$5 million grant by the Swiss Government to the Government of Tajikistan, has been used to finance a tariff subsidy to ensure that a "lifeline" monthly supply of electricity is delivered at a very low rate even to the poorest of households. Also built into the tariff structure is an "Early Years Subsidy" – a long initial grace period that allows tariffs to climb slowly from current levels – thus further reducing risk and keeping tariffs affordable.

## 6 Conclusion

This brief paper touches on the experience of PPPs in developed countries and considers some of the issues which developing countries will need to address if they are to successfully attract PPP style investment in their social infrastructure. The case studies illustrate some of the successes as well as some of the problems projects have encountered.

In conclusion, there are a number of factors which need to be considered and resolved if the private sector is to invest significantly in healthcare infrastructure PPPs in developing countries. As a minimum, the following will need to be addressed:

- Long term vision – for the country’s health policy of which PPPs are a part, is important in terms of creating buy in from the population as well as from potential investors.
- Political stability – Stability is key and without it, many investors will consider the proposition too risky.
- Legislative framework which allows the private sector to participate freely.
- Practical and transparent processes –which deliver projects quickly and effectively.
- Revenue support – may be required over the medium to long term. MDBs and others can play an active part here.
- Expertise – will be needed by the public sector to structure and deliver these projects. Where there is a significant programme planned, serious consideration should be given to setting up central PPP units whose role is to monitor PPPs and disseminate good practice.
- Support to local funding institutions – from the World Bank and others will be needed to support the development of local banks where project finance experience is not readily available.

There is no doubt about the huge need to invest in both hard and social infrastructure around the globe and in particular in developing countries, if they are to meet the Millennium Development Goals. It is also clear that on their own, governments don’t have the capacity to deliver the level of investment required. Radical solutions are therefore required and PPPs can certainly form part of those solutions. Dealing with the issues above will go a long way to creating an environment which attracts private sector investment, but above all else political will, determination and international support, will play a key role in whether PPP programmes can indeed succeed in developing countries.