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Public Private Partnership Development Program

PPP GUIDANCE NOTE NO. 2

Fiscal Controls and Municipal PPPs

IMPROVING PUBLIC SERVICES, INFRASTRUCTURE, THE ENVIRONMENT AND THE ECONOMY THROUGH PUBLIC-PRIVATE PARTNERSHIPS

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Fiscal Controls and Municipal PPPs

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ABOUT THE PUBLIC-PRIVATE PARTNERSHIP DEVELOPMENT PROGRAM

The goal of the Ukrainian Public-Private Partnership Development Program (P3DP), implemented by FHI 360 and funded by the United States Agency for International Development (USAID), is to broaden the use of PPPs in Ukraine and expand the role of private sector finance, expertise, and modern technology to improve infrastructure, the quality of public services, and the environment. The program provides assistance to the Government of Ukraine at national, regional and municipal levels to improve the legal and institutional framework, enhances the capacity of individuals and organizations to design and engage in PPP activities, and supports the implementation of pilot PPP projects. Importantly, P3DP assistance is developing the capacity of government to work effectively with the private sector in building or rehabilitating infrastructure, improving or restoring public services, and developing the economy.

Beginning operations in October 2010, the Program is pursuing the achievement of four interrelated, mutually-reinforcing objectives, each contributing to the development of PPPs in Ukraine in full alignment with USAID's Country Development Cooperation Strategy for Ukraine:

1. Create a Legal and Regulatory Framework Conducive to PPPs by improving legislation, regulations, and policies that support PPP initiatives at national and municipal levels.
2. Strengthen the MOEDT's Capacity to Guide and Support PPPs so that it serves as valuable resource for municipalities and government agencies seeking to improve the efficiency and quality of public services and infrastructure through private sector participation. The MOEDT coordinates much of its PPP support work through the recently established PPP Unit.
3. Develop PPP awareness and capacity of municipalities to create and implement PPPs while improving local governance practices. Training, workshops, seminars, conferences, and study tours contribute to the growing body of knowledge on PPPs at the local level. P3DP also demonstrates how strategic communication programs that reach out to the general public and media provide valuable input during the PPP development process.
4. Implement Pilot PPPs in key sectors by providing technical assistance to selected municipalities in all phases of development, from initial concept through the transparent, competitive tendering process. Practical experiences and lessons learned provide valuable feedback to further improve the PPP environment and processes in Ukraine.

About the Author

Dr. Chris Shugart is an independent consultant who has been specializing in private sector participation in infrastructure and PPPs (among other related things) since 1994. He received his Ph.D. from Harvard University in 1998, his dissertation being devoted to PPP contracting. Dr. Shugart works as an advisor, transaction consultant, researcher, and trainer. His principal areas of expertise include: private participation in infrastructure; public-private partnerships (PPPs); concession, BOT, and management contracts (including water and wastewater); structuring incentives; pricing policy; regulatory frameworks, systems, and methodologies; project finance; support in negotiations; and litigation support.

Dr. Shugart has recently been involved in the preparation of a major PPP guide. He was the lead external advisor in the preparation of PPP Guide to Guidance commissioned by the European PPP Expertise Centre. Dr. Shugart has strong PPP transaction experience. He worked as a Senior Banker for the EBRD for five years (1995–2002) and led the development and financing of several PPPs, including the Sofia water concession and the Zagreb wastewater treatment plant BOT.

Before that, he was one of the two lead advisors to the Municipality of Maribor (Slovenia) to prepare a BOT project for a wastewater treatment plant (1995–1997), the first such project in former-socialist central Europe, and a project in operation today.

SUMMARY

Full competitive tendering for public private partnerships (PPPs) is considered best practice, Governments around the world have become acutely aware that PPPs can result in large future fiscal commitments that may not be apparent because they are not accounted for in the same way as normal liabilities (e.g. government debt). Contractual commitments to pay the PPP company over 20–30 years are technically not debt service, but they can have a similar fiscal impact. This note looks at the issues, especially in the context of municipal PPPs, discusses approaches used in other countries, and then gives suggestions for how Ukraine might deal with these questions as a first step. The note does not look at broader questions of budgetary reform and does not enter into specific accounting details.

At present, Ukraine takes an extreme position of control in this regard, so extreme that the problem does not arise because municipalities are simply prohibited from making payment commitments that extend beyond the current budget year. But this inhibits many kinds of potentially beneficial PPPs. The note argues that there are other, less extreme, forms of sound controls and safeguards.

A distinction needs to be made in the discussion between absolute obligations to pay (i.e. "direct" liabilities) and contingent liabilities (i.e. payments that would be made only under specified conditions – e.g. a minimum revenue guarantee given by the municipality, where the primary source of revenue is user charges).

It is suggested that, with respect to direct liabilities, a simple (and objective) way to begin would be to require that municipalities treat the value of the assets financed by the PPP company to be a "debt equivalent" (regardless of who owns the assets) and that this value should be added to other municipal debt for purposes of complying with the debt limits of the Budget Code. Since we are concerned here only with future payments from the municipal budget, a pro rata allocation of asset value would need to be made if the PPP Company will receive part of its revenue from other sources – e.g. users.

Contingent liabilities from PPPs are more difficult to deal with. There is no clear international best practice – except to encourage careful analysis and disclosure of contingent liabilities. It is suggested for Ukraine that, during an initial period, contingent liabilities should not be used quantitatively for purposes of complying with the debt limits of the Budget Code. Instead, municipalities should be required to systematically assess and record the estimated future impact of contingent liabilities (in accordance with a required methodology) and to confirm that these are manageable by the municipality.

1. INTRODUCTION

Public private partnerships (PPPs) by their very nature are based on multi-year contracts, often for 20–30 years. There is a legitimate concern in Ukraine, as in other countries, that by entering into PPP agreements, municipalities could commit themselves to imprudent long-term payment obligations, both direct and contingent. As a recent World Bank publication sums up: "It is critical to manage PPP fiscal commitments if governments are to make good choices about which projects to do as PPPs." [1]

The future fiscal consequences of PPPs are often not readily apparent. Most countries – including Ukraine – do not yet put PPP debt (i.e. the debt of the PPP company) on their own balance sheets.[2] PPPs may seem to offer an advantage to government (national governments and local authorities[3]) – and to politicians – because new investments can be made through PPPs often without any effect on government debt and with either no effect on government spending (in the case of a fully user-funded PPP where no payments from the government budget are required) or a deferred effect (in the case where government pays from its budget but only once the services start). But the true impact on the future cash flows of the government may be substantially the same as if the investments were undertaken by the public sector.

PPPs can bring many advantages to government and to the public, but it is not helpful to create an artificial bias in favor of PPPs by promoting them on the basis of illusory benefits.

Direct and contingent liabilities in PPP arrangements have turned out to be a serious problem in some countries: they can impose a huge fiscal burden that becomes apparent only later – when it is too late to deal with them adequately. These payments are similar in many ways to debt service payments, even if they are not considered as such by accounting conventions.

One way to partially deal with the problem with respect to municipalities would be to prohibit municipalities from entering into PPPs that involve payment obligations that extend beyond the current budget year. At present, a municipality in Ukraine is not permitted to commit itself to make payments, other than debt service or debt guarantees, unless the related expenditures are included in the current annual budget. Debt and debt guarantees cannot exceed certain quantitative limits, verified by the Ministry of Finance, but in principle such multi-year commitments are valid.

The relevant part of the Budget Code (in Article 48) reads as follows (unofficial translation):

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[1] World Bank Group, *Operational Note: Implementing a Framework for Managing Fiscal Commitments from Public Private Partnerships* (2013), p. 1.

[2] This practice is likely to change in the future in the light of standards issued by the International Public Sector Accounting Standards Board. Under IPSAS 32 (first issued in October 2011), PPPs should be included in both government deficit and debt.

[3] In this paper, "government" will often be used loosely to encompass both *national* government and *local* authorities (municipalities). In some countries, such authorities are referred to as "local government".

3. Orders, entering of contracts, purchases of goods, services, or other similar transactions during the budget period, for which the possessor of the budget is to be bound without a corresponding budgetary appropriation or in excess of the authority established by this Code and the Law on the State Budget of Ukraine (the decision on approval of the local budget) are invalid. Such transactions do not create budgetary commitments and budget arrears.

Although there are differences of opinion about the exact way that this provision should be interpreted, in practice the provision inhibits PPP projects in Ukraine that do not rely solely on user charges for the remuneration of the PPP company and that would require future payments from the budget.

In actual practice, commitments that run beyond the current budget year are commonly entered into by municipalities in Ukraine (e.g. multi-year construction contracts), and no one contests their validity. So the present provisions of the Budget Code may not be a barrier to multi-year payment commitments in a municipal PPP agreement for a private partner that is willing to put its trust in customary practice. But simply trusting a municipality to honor its obligations over a three-year construction contract is very different from trusting a municipality to honor PPP obligations that may extend for over 30 years, long after the present municipal officials have moved on to other jobs.

Limited legislative changes have been proposed – and at present are being reviewed by various departments as a prelude to being submitting to the Verkhovna Rada – which would allow contracts with energy service companies (ESCOs) in which a municipality commits itself to make future payments over a period of more than one year. Broader changes were proposed, but the Ministry of Finance has been resistant to them in part because of the possibility that greater freedom would be abused and would lead to an unacceptable increase in the budget deficit.

So long as there is no change in law to allow municipalities to enter into multi-year payment commitments, the problem of fiscal control over municipal PPPs is dealt with by simply prohibiting such long term liabilities, and the ideas in this paper are not directly relevant. But since some of the resistance to eliminating the absolute prohibition is based on the idea that this would remove needed controls and encourage abuses, it is useful to set out other ways – less draconian ways – of preventing excessive long term liabilities in connection with PPPs.

Different countries have adopted different ways to deal with the problem. This paper will examine, at a high level, some of the issues and possible solutions. The optimal solution for a given country depends on, among other things, the particular form of fiscal relations between central government and municipalities and the country-specific process of budgeting and expenditure control.

An important big-picture question is how a municipality should secure budget approval and funding for future payments relating to PPPs. Some countries (including Germany and France) use two different kinds of authorizations in the budget: spending appropriations and commitment appropriations. Spending appropriations cover only the current year, but

commitment appropriations look at future years and lock in funds for those years. Such an approach, which depends on multi-year forecasts of revenues and spending, can be useful for PPPs and can make the future implications of PPPs more transparent.

Another approach to the budgeting problem is to first budget for PPP projects just as if they were public sector investment projects. Then after the budget has been approved, a separate decision would be taken about the procurement method, where PPP would be considered simply as one possible way of implementing the investment, but not affecting how it is to be treated in the budget.

These are issues that should be considered in the context of the broader budgeting process in Ukraine, but they go beyond the limited scope of the present paper. The present paper looks more narrowly at the question of what kind of controls should be placed on a municipality's decision to enter into a PPP agreement because of its future fiscal implications. The hope is that, by showing that other kinds of controls can be used, this might remove some of the resistance to allowing municipalities to make payment commitments in the context of PPP agreements.

A final introductory comment is that the paper does not address the complexity of accounting rules regarding contingent liabilities. The methods of control discussed in this paper might or might not to be based on conventional accounting rules, but in any case it could be important to take government accounting (and reporting) rules into consideration in designing and implementing them. The present paper does not enter into this kind of detail.

2. MUNICIPAL PAYMENT OBLIGATIONS RELATED TO PPPS

It will be useful first to examine the kinds of payment obligations that a municipality might have under a PPP. Examples of the two main types are as follows:

- Direct liabilities
  - The most straightforward case is where the municipality is the primary obligor under the PPP contract – i.e. it is directly obligated to pay the PPP company for the goods or services, often when the PPP delivers a service directly to or for the municipality. These are often called "direct" liabilities. [4]
  - In some PPPs, the municipality has an obligation to make a payment from its budget every month to supplement user charges – e.g. if a subsidy is needed for the PPP to be financially viable. This would also be a direct liability.
- Contingent liabilities
  - In general, a "contingent" payment is one that depends on the occurrence or nonoccurrence of an uncertain future event.[5]
  - It could be that the payments are to be made in the first instance by a municipal enterprise and the municipality has guaranteed these payments. In this case, the obligation of the municipality is contingent – in the sense that it pays only if the municipal enterprise fails to pay.
  - Some payments are contingent in other ways. For example, in a "minimum revenue guarantee", the municipality would be obligated to make payments to ensure that the PPP company receives a specified minimum revenue, taking into account revenue received from user charges. The payments are not fixed in a predictable way ahead of time: they depend on how much revenue is raised from user charges. So they are risky, or contingent, payments.
  - An important contingent obligation concerns "termination payments". In those cases in which the municipality will receive a useful asset if the PPP agreement is terminated, it will often be in line with best practice for the municipality to pay something to the PPP company if early termination occurs, even if the PPP company was at fault. Otherwise there would be unjust enrichment. This is clearly a contingent payment: if the project continues to its natural expiry date, the payment will never take place.

An important problem is how to quantify payments that are contingent. We will return to this later on.

[4] The term can be misleading. An obligation could be non-contingent even if it the payment is not made directly to the ultimate recipient. Also, strictly speaking, one could consider the basic PPP service payment to be a *contingent* obligation: it is conditional on services being provided ("availability") and being provided adequately. But the basic payment for the PPP goods or services is conventionally treated as a direct obligation.

[5] This may not correspond with some accounting definitions of a contingent liability, but it is conceptually sound and useful for present purposes.

3. POSSIBLE APPROACHES

3.1 Overview

Different countries have adopted different solutions to the problem posed by PPP-related payment obligations of municipalities. The broad types of solution (similar to those applicable to ordinary debt limits) lie along the following continuum, with possible intermediate points):

- Hands off. PPP obligations are considered to be the municipality's business; the municipality will take the consequences. Lenders will look at all the facts and will decide if the municipality is a creditworthy contractual party. Market pressure is the means of control.

  This solution makes sense only if it is clear that the central government will generally not bail out defaulting municipalities. If there is an implicit central government guarantee to pay up, then this solution can open the door to a disaster.

- Full analysis and disclosure – informed choice. Ensure that the municipality fully understands the consequences and that the issues are adequately debated in the city council (and disclosed to the public), and then let the municipality decide.

- Quantitative rules. The national government sets firm quantitative rules that limit municipal exposure to PPP payment obligations.

- Direct administrative control. Require pre-approval of each PPP agreement by a higher body (e.g. ministry of finance) based on the future fiscal impact. A variant could be to require this only for PPPs with a potential impact that exceeds some threshold.

  The way the potential impact is defined and measured would have to be specified. For this purpose, it could be a very rough way; objectivity is more important here than accuracy.

- Blanket prohibition. Municipalities are not permitted to enter into PPPs where municipal payment obligations extend beyond the current budget year. This is the present position adopted in Ukraine. It certainly prevents excessive fiscal exposure from PPPs, but this is at the cost of forgoing the benefits that can be obtained from well-chosen PPP projects.

The sections below will look in more detail at the second and third bullet points.

3.2 Better analysis and disclosure of information

One approach that could be taken would be to ensure that the municipality fully understands the consequences of the PPP agreement – with open debate of the issues in

the city council – and then to let the municipality bind itself contractually and take the consequences.

The issue arose in the early years of the Private Finance Initiative (PFI) in the U.K.[6] Existing legislation was not clear about whether local authorities had the power to enter into PPP contracts (i.e. they might be ultra vires and they could be declared null and void by the courts), and banks were reluctant to lend for local PPPs and to accept guarantees given by municipalities in this connection.

The problem was remedied by the Local Government (Contracts) Act 1997. That act provided for a process of "certification" of the PPP contract, by which (in essence) the local authority makes it clear that it takes the contract seriously and understands its consequences. The intention is that the certificate issued by the local council gives sufficient detail about the contract to show that the local council considered all the important issues before approving the contract.

The English approach distinguishes between public law and private law. If the PPP contract is duly certified, the contract cannot be challenged in a private law action (e.g. where the bank claims breach of contract), but it can still be challenged by local residents and auditors in a public law proceeding (judicial review or audit review). The outcome in this case, however, would not affect the PPP company's rights vis-à-vis the local authority.

Although the English approach was not intended specifically to deal with the problem of long-term payment obligations of a local authority, it would not be difficult to adapt it to that purpose.

There is an international consensus that – at least as a first step – an important way to address the question of direct and contingent liabilities arising from PPPs is to bring them out into the light so that their future fiscal impact can be well understood and taken into account in planning and implementing PPPs.

The requirements set out by the government for the methods used for analyzing and appraising a PPP project should specify that municipalities should determine and disclose payment obligations (including contingent liabilities) arising from the PPP – and that the impact of the PPP in relation to the municipalities' budgetary needs and resources in future years should be assessed.

The requirements might include items such as the following, tailored to the particular circumstances (this is merely an example for purposes of illustration):

- The PPP feasibility report must give the values of any requested or envisaged debt guarantees by the state or by a municipality.
- The PPP feasibility report must set out, year by year if appropriate, estimated values for all the impacts that the PPP project will have on flows to and from the state and

[6] British PFI contracts would be called "PPP" contracts in many countries, and this paper will refer to them as such for simplicity.

municipal treasuries. Depending on the particular PPP project, the flows that must be shown must include, among other things:

- Direct obligations of the state or municipality to the PPP company under the terms of the PPP agreement (or an associated agreement) based on availability or provision of the services;
- Contingent payment obligations under the terms of the PPP agreement (or an associated agreement); and
- Fees and tax payments made by the PPP company to the state or municipality.

- The values of the contingent liabilities and other risky outflows indicated above must be given, item by item, under at least the following different probability assumptions:
  - Full exposure or maximum payment, if relevant;
  - Most likely values or expected values; [7]
  - For certain substantial items, as appropriate, some measure of "value at risk", meaning a value that has a specified low probability of being exceeded.[8]

It would be useful for Ukraine to consider ideas like this in reviewing and improving its PPP-related regulations (at the ministerial, not cabinet, level).

A further step that might be adopted in Ukraine would be to require the city council to include an explicit and prominent statement in the resolution it passes approving the PPP project to the effect that the city council understands and has taken into consideration the fiscal consequences of the direct and contingent liabilities as analyzed and set out in the PPP feasibility report. (This is analogous to the "certification" procedure mentioned in section 3.2.)

3.3 Quantitative limits

Just as some countries impose quantitative limits on municipal borrowing, the same could be done regarding future payment obligations relating to PPPs. This would involve two questions:

- How to determine what the best measure should be: What is the variable that is being examined?
- How to determine what the criterion values should be: What should the ceiling be for the value of each such variable, above which PPPs will not be permitted?

There are controls in existing law in Ukraine concerning municipal debt and debt guarantees. The argument could be made that the state should have the same kinds of control over municipal payment commitments in PPP contracts. The relevant legislation could be amended so that the direct financial obligations of budget organizations arising

[7] The term "expected value" is being used in its mathematical sense, and this definition would need to be set out in the regulation.

[8] See further discussion of value at risk on page 1**Error! Reference source not found.**7.

from PPP agreements are to be considered as if they were debt obligations or debt guarantees, as appropriate.

But this is not as simple as it might appear at first. The main difficulty in the case of PPPs is that there is no obvious single number that plays the role that "outstanding debt" plays in the case of a loan. The sections below explore the challenges and different possible solutions.

The second bullet point above – the question of how to specify the quantitative limit – does not pose as much of a problem. In fact, there is no fully objective way to set the limit; countries adopt rules of thumb that seem reasonable.

3.3.1 Accounting approach: EU rules

One possibility for a country would be to model the quantitative limits on the European Union (EU) rules relating to the treatment of debt in PPPs. For the EU, PPPs do not increase national debt for Maastricht purposes so long as the PPP company bears (i) construction risk and (ii) either availability risk or demand risk.[9] A government might decide to use similar criteria in putting limits on their municipalities' PPP contracts.

The problem is as follows. Many good-practice PPPs would meet these criteria. Generally the risk of cost overruns and completion delays (construction risk) is borne by the PPP company, and at the very least the public authority does not have to pay if the service is never made available, or they pay only to the extent that the service is made available (availability risk). Hence the PPP debt would be placed off the government's balance sheet – even if the PPP involves binding and predicable payment obligations that extend into the future.

But the objective of the Maastricht criteria is not to help countries control municipal liabilities. Adopting these criteria for present purposes (limits on municipal PPPs) could lead to distorted decision making by municipal officials. For example, a municipality might decide to build and maintain a bridge by using a PPP instead of using conventional public procurement financed by a municipal loan that would go on the municipality's balance sheet. Using the EU criteria, the bridge PPP would probably not put debt on the municipality's balance sheet because the PPP company would take construction risk and availability risk. But the payments required to be made by the municipality to the PPP company (ignoring the part to be paid for on-going maintenance) would be very similar to debt service payments. The way a municipality can make debt disappear in this way is fiscal smoke and mirrors.

At least for purposes of internal fiscal control, a national government should focus more on true fiscal impact rather than accounting rules devised for some other purpose.

[9] The "Maastricht criteria", to which EU states must adhere, include government deficit and debt limits. The criteria noted in the text are set out in the European System of Integrated Economic Accounts (ESA 95), and also in the European System of National and Regional Accounts (ESA 2010), which will replace ESA 95 starting in September 2014.

3.3.2 More fundamental approaches

A more appealing solution might seem to be to treat future PPP payment obligations in the same way that debt service is treated. National governments often have debt limit rules for municipalities. Why not apply these same rules to PPPs?

Under existing law in Ukraine (Budget Code, Art. 18), municipalities may take on debt (including the guarantee of debt)[10] so long as the total outstanding debt of the municipality does not exceed the estimated amount of its development budget for the next two years.

The problem in expanding this to apply to PPPs is that it is not obvious how to determine what the "debt equivalent" to PPP payment obligations should be in all cases – mainly for the reasons set out below.

One reason is that it is the PPP company that takes on the debt and receives financing from equity holders. PPP obligations involve a stream of payments into the future; there is no stated equivalent of the initial outstanding "debt" value – no face value – as there would be for a loan. It would be possible to consider only the debt taken on by the PPP company, but this would not be sufficient because the public authority's binding obligations include remuneration of the PPP company's equity holders as well as debt holders.

The most correct solution financially would be to capitalize these future payments using an appropriate discount rate to arrive at a "present value", which would be a measure of the outstanding liability at the present time. But this adds complications and so would require more detailed rules. Moreover, there is no consensus internationally that capitalizing future payments in a PPP contract to arrive at a single figure for the present value of PPP liabilities is the best way to deal with this issue.[11]

Another issue is that there is a refinement that would need to be made to the method of capitalization noted above. Only that part of the future payments that reflects capital investments (including related financing, both debt and equity) should be considered. The part of future payments under a PPP agreement that reflects recurrent operating and maintenance expenditures should not be included. The reason is to treat like with like. Debt and equity are (or should be) used for capital expenditures. But the service fee in a PPP includes both a capital charge and a payment reflecting the PPP company's expenditures for operating and maintaining the infrastructure to provide the public service. Therefore the only part of the capitalized future PPP payments that should be included as equivalent to municipal debt is the part that corresponds to capital costs.

[10] But municipal guarantees of debt to international financial institutions are excluded from the calculation.

[11] E.g. an IMF publication in 2006 refers to the disadvantage of "treating the present value of future service payments by the government under PPP contracts as a liability" because this has "little immediate prospect of being accepted by accountants or statisticians" (IMF, Public-Private Partnerships, Government Guarantees, and Fiscal Risk).

In some PPPs, where the service fee is built up from its components, it will be very clear what the "capital charge" (remuneration to debt and equity holders) is. But not all PPPs go into this much detail in their payment mechanism.

All in all, the simplest and most objective solution for direct liabilities is probably to take the value of the assets financed by the PPP company as the value to be considered. Of course, implementation would require appropriate financial accounting and reporting by the PPP company. One could argue that this is not quite right conceptually,[12] but the greater objectivity and ease of determination should outweigh any conceptual drawbacks. It might be good as a first solution adopted by a country, possibly to be refined later, in the light of experience.

It should be noted that this treatment fits in well with the two-step budgeting approach noted above (see pages 8-9). If the municipality were to finance the asset itself directly with a loan, the value of the municipal debt would equal the value of the asset (including capitalized interest during construction).

3.3.3 Contingent liabilities

The most difficult problem of all is how to value contingent payment obligations – those that take place only under certain conditions (e.g. when the revenue generated by user charges falls below a specified value).

There has been considerable discussion internationally about this question – both in the context of debt and more recently in the context of PPPs. It would seem to be too conservative to value all of these contingent liabilities at their maximum exposure value (i.e. the very worst case that could occur). But there is no consensus about the right approach; and in any case most approaches involve detailed decision rules and a relatively sophisticated capability for quantitative analysis.

To take a simple example, suppose the municipality agrees in a PPP contact for a solid waste landfill that the revenue to the PPP company must never fall below UAH 100,000 per year and that it will make up any shortfalls in user revenue by payments from the municipal budget. Now suppose also that a risk analysis shows that there is only a 20% chance in any year that revenue from user fees will drop below UAH 100,000, so it is expected that the revenue guarantee would not need to be called at all in four years out of five. And in the years in which it is called, how much would have to be paid? It is not likely that the full UAH 100,000 would have to be paid in every one of these years.

[12] The capital-charge component that the municipality pays to the PPP company includes a return on equity as well as a return on debt, and equity is more expensive than debt – and both (if done in the context of "project financing") are likely to be more expensive than debt to a government. So the debt-equivalent for the government is likely to be greater than if the asset were financed by government borrowing.

If the contingent liability is valued at its maximum exposure (or maximum loss) value,[13] then that would mean treating it as if the municipality is committing itself to pay UAH 100,000 every year. This seems excessive. The problem is that there is no easy rule-based way to arrive at a more sensible figure.

The other extreme would be not to count contingent liabilities at all for purposes of quantitative limits, because there is no clear and objective way to value them for this purpose. They would essentially be "footnote" items, requiring consideration on a qualitative and judgmental basis.

Another solution would be to exclude contingent liabilities in PPPs from the strict quantitative limits but to say instead that a determination of whether a contingent liability is acceptable will be made in conjunction with the appraisal of the these aspects of the PPP by a body at a higher level. The assumption is that the higher level has more competence at assessing the importance of the contingency, which may or may not involve carrying out a rigorous quantitative risk analysis.

An intermediate position, inspired by IPSAS (International Public Sector Accounting Standards) rules, would be that if the probability is estimated as being more than 50%, the contingent liability should be recorded at full value; otherwise it would become a footnote item.

A more nuanced approach would be to classify the contingency while attempting slightly more accuracy by using five levels of probability of occurrence: very high, high, medium (i.e. even odds), low, very low. Each of these categories would be pre-assigned a rough quantitative probability measure (e.g. 90%, 70%, 50%, 30%, and 10%, respectively). Then expected values would be calculated in the normal way, by multiplying the maximum value by the probability. This is certainly a crude method, but it is arguably better than either ignoring the contingency entirely or booking it at full value, and, given the uncertainties, it may be about as far as one can generally go before entering into the realm of spurious precision.

In circumstances in which it seems justified to go further in the direction of quantitative precision, there are various approaches for valuing contingent liabilities more precisely, but not all of them are easily applicable to PPPs. Mathematically sophisticated methods, such as option pricing, have a limited possibility of use.[14] Risk simulation (more precisely, Monte Carlo simulation) is much better suited, but it requires professional competence to do well, and even then it is only as good as the assumptions used.

If precise information on probabilities could be calculated, a good way would be a measure of "value at risk" (alternatively, "cash flow at risk"). This is the value for which there is only

[13] In the context of loan guarantees and similar, the term "face value" is often used for full exposure value. But the contingent liabilities in PPPs often do not have an explicitly stated face value. The value usually has to be calculated.

[14] Option pricing could possibly be used for contingencies involving well-understood financial variables, such as exchange rate guarantees.

a small predefined probability (e.g. 1% or 5%) that the value would be exceeded. The good thing about such a measure is that takes into account the probability that the event will occur. The challenge is that it takes high competence and good judgment to carry out a Monte Carlo risk analysis well and to avoid opportunistic manipulation of the results.

In the light of the need for greater competence, one could imagine other kinds of rules. For example, one possibility would be that if the full-exposure value of the contingent liability exceeds a specified threshold (which could be a percentage of municipal budget revenue rather than an absolute value), then a higher-level body must estimate the expected value and value at risk for purposes of the overall PPP ceilings using a more sophisticated analysis. But if the full-exposure value is under the threshold, the municipality would be allowed to make its own estimate, which must be based on a reasoned explanation, and could be partly quantitative and partly qualitative (as in the method above using the five-part classification – see page 17).

There is an intractable problem in accounting for contingencies by using expected values whenever (i) there are only a few items (so the risks cannot be diversified in a large pool) and (ii) the outcome is strongly binary in nature (either you do not pay at all or you pay at the maximum value, with a low probability of anything in between). In these circumstances, using the maximum exposure value is often the prudent solution.

Whatever the method used, it is important not to double count contingent liabilities. This can easily happen in relation to termination payments. If the municipality is making availability payments on a periodic basis and the PPP is terminated early, resulting in a large lump sum termination payment, the present value of both of these may not be very different – since the termination payment is often intended to capture (at least in part) the net present value of the future cash flows to the company that will no longer occur. It would therefore be wrong in this case to include both the entire direct liability for availability payments and the contingent liability for termination payments.

A final comment is that, in principle, a government's treatment of contingent liabilities resulting from PPPs should be based on the same principles that apply to its treatment of contingent liabilities of other kinds: loan guarantees, exchange rate guarantees, government-provided insurance, legal claims against the government, etc. But if a government does not have a sound and systematic policy concerning the quantification and reporting of contingent liabilities in general (as Ukraine does not), beginning to do this in the limited sphere of PPPs may be a good place to start.

3.3.4 Global debt limits or PPP-specific limits

In principle, the best approach would be to combine the value of debt from direct borrowing by municipalities and from the debt equivalent of PPP obligations – to use a common metric. Municipalities would then need to make trade-offs between conventional public procurement and PPPs without there being a fiscal bias in favor of one or the other.

For example, under the laws of the state of Maryland in the U.S., the Board of Public Works in not permitted to approve a PPP if the PPP would result in the state exceeding its general "debt affordability" (debt limit) guidelines.

But given the common tendency of government departments and municipalities not to give sufficient attention to future payment obligations relating to PPPs, some countries view the risk of imprudent behavior to be greater for PPPs than for ordinary debt and so have adopted limits that are specific to PPPs (see the examples in the next section). The drawback is that some municipalities might then implement PPPs up to the limit simply as a way to leave more fiscal space to permit taking on more direct municipal debt. This would not be a good justification for choosing the PPP route.

3.3.5 Stocks and flows

Another issue is whether there should be limits just on the debt equivalent of PPP payments or also on the annual PPP payments themselves in relation to municipal budget revenues – a stock versus flow issue.

Arguably, limits should apply to both stocks and annual flows. This would give greater protection. A given debt-equivalent value (or asset value) will have a greater cash flow impact on the municipality in the short and medium term to the extent that the duration of the PPP is shorter – because the capital charge to be paid to the PPP company will have to be compressed into a shorter period.

Several examples are as follows (taken from a recent IMF publication): [15]

- Stock ceiling
  - Hungary – the nominal value of new long-term commitments in any single year cannot exceed 3% of total state budget revenues
  - Peru – the present value of all contingent and non-contingent liabilities in PPP projects cannot exceed 7% of GDP
- Flow ceiling
  - Brazil – current spending from PPP contracts cannot exceed 3% percent of net current revenue
  - El Salvador – the present value of all quantifiable firm and contingent future net payments assumed under PPPs cannot exceed 5 % of GDP

Of course limits like these would have to be phrased appropriately to make them applicable to municipal finance.

[15] Katja Funke, Tim Irwin, and Isabel Rial, Budgeting and Reporting for Public-Private Partnerships (International Monetary Fund, March 2013).

4. RECOMMENDATIONS FOR UKRAINE

Of course, further discussion of all the issues is needed before Ukraine should take any decision about how to exercise appropriate control over municipal financial obligations relating to PPPs –assuming that the extreme form of control that exists now (i.e. no multi-year financial commitments at all) will be relaxed. Nevertheless, it is useful to tentatively sketch out the methods that might be considered as a first step.

To deal with the direct liabilities of a municipality arising from a PPP agreement (i.e. payment obligations conditional only on the availability of the services at the required quantity and quality), it is recommended that the municipality be required to treat the value of the assets financed by the PPP company as the "debt equivalent" and to include that value in municipal debt for purposes of complying with the limits set out in the Budget Code. If the PPP company will receive only part of its revenue from the municipality and the other part from other sources (e.g. users), then there will need to be a pro rata allocation of the asset value. Also, it will be necessary to specify the rules for how the asset value, for this purpose, will decrease over time.

As noted in the discussion on page 9, the virtue of this method is its relative simplicity and objectivity. As such, it is a good way to start. It sends a strong message that a municipality cannot make debt disappear just by entering into a PPP instead of by taking a direct loan to implement the infrastructure, and that is a valuable lesson.

As for contingent liabilities (see section 3.3.3), it is recommended that during an initial period, contingent liabilities resulting from PPPs should not enter into the calculation of debt for purposes of complying with the quantitative limits under the Budget Code. Instead, the emphasis should be on adequate analysis and disclosure by the municipality before signing the PPP agreement (see section 3.2). The main reason is that it is important to gain experience in estimating the quantitative impact of contingent liabilities and to make sure that the methods are sound and are being handled competently before using the results for purposes of mandatory quantitative limits.

The PPP feasibility report should set out all of the municipality's contingent liabilities under the PPP and, first, give the maximum exposure value for each item and for each year. The municipality should feel confident that it will be able to find a way to pay the required amount for each item (even though this may be very difficult) in, say, any two consecutive years if the particular risk should materialize at its maximum value in both years.

Next, the expected values of the contingent liabilities should be estimated for each item and each year and then summed for each year. For a few items, it may be possible to use rigorous quantitative risk analysis of some kind. But for many of the items, it is suggested that a method such as that outlined on page 17 be used, in which a qualitative assessment is made (i.e. the risk is considered to be very high, high, medium, low, or very low) and then pre-specified probability values are used to calculate a rough measure of expected value.

The municipality should be confident that it would have the ability to pay the resulting amounts, year by year, from its budgetary resources on a sustainable basis (since these are expected values) without compromising other normal expenditures.[16]

This method, by itself, does not give full assurances that the municipality will be able to meet all of its contingent liabilities since they are by nature risky (in the same way that there is some probability, however small,[17] that a person will get five heads in a row when flipping a coin), but it should serve as an educational tool to get municipalities into the habit of examining contingent liabilities arising from PPPs and taking them into consideration in a serious and systematic way. The controls could be refined after several years of experience and feedback.

[16] In keeping with the scope of the present note, this recommendation does not address the question of how contingent liabilities arising from PPPs should be accounted for in budgeting. In some countries, for example, the budget includes an explicit line for "contingencies". Or a special contingency fund can be set up and maintained at a level expected to be adequate.

[17] A probability of 3.1% in this example.