

# Contingent Liabilities of Public-Private Partnerships (PPPs) in Russia and BRICS Countries: Assessment and Risk Mitigation Mechanisms<sup>1</sup>

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## Abstract

*This article is devoted to the assessment of the conditional liabilities of public-private partnerships (PPPs) and measures to reduce the risks associated with them. First, a quantitative assessment of the contingent liabilities of PPP projects at the federal level is carried out. Contingent liabilities for public-private partnership projects are estimated to amount to 2.3 trillion roubles for the period 2021–52. Second, the experience of creating a system for managing the contingent liabilities of PPPs in Russia and the BRICS countries (Brazil, Russia, India, China and South Africa) is summarized. This analysis shows that each of the BRICS countries has a legislative and technical framework for managing fiscal liabilities but does not use it to the fullest extent. Consequently, to improve functioning it is necessary to regularly update, fill in, and expand the number of available financial indicators for PPP projects. Of the BRICS countries, South Africa is characterized by the most complete and transparent system for managing PPP-related contingent liabilities, but Russia could use some of the measures implemented in other BRICS countries to improve its own system, including the creation of a guarantee fund (Brazil), a system for operational project evaluation (India) and the practice of project approval by the fiscal authority (China).*

**Keywords:** PPPs, fiscal risks, implicit and contingent liabilities, BRICS, monitoring of contingent liabilities

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## Introduction

Infrastructure development is a common goal of the BRICS countries of Brazil, Russia, India, China and South Africa, a priority for intra-group cooperation, and simultaneously a major hindrance to their economic growth. According to the Global Infrastructure Hub, the annual gap in Russia's investment into sustainable development infrastructure will constitute 1.9% of the gross domestic product (GDP) in 2020–40 [Global Infrastructure Outlook, n. d.]. The main strategies for resolving this problem involve attracting private investments and developing

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a system of public-private partnerships (PPPs). For Russia, this is particularly relevant in the context of implementing national projects and the need to attract more than 3 trillion roubles in private investments for the construction of infrastructure under the Comprehensive Plan for Modernization and Expansion of Trunk Infrastructure. But a decrease in direct government liabilities achieved by attracting private capital and splitting risks with private partners often comes at the expense of an increase in contingent government liabilities, that is, government liabilities that emerge with the occurrence of certain events.

Contingent liabilities are one of the most important sources of budget risks. They can be explicit liabilities, which are determined by contracts or other agreements, or implicit liabilities, which are not legally binding and “stem from a government’s obligations to the society due to a project’s public significance” [Andryakov, 2018, p. 61]. The absence of a system that would account for and model contingent liabilities and, consequently, the failure to prepare for their occurrence can lead to a significant increase in national debt and may be instrumental in the onset of a budget crisis.

This issue becomes particularly topical at a time of crisis, when the implementation of projects is postponed, financing opportunities dwindle, and private partners face a higher risk of insolvency. For example, lockdowns and a global slowdown of economic activity affected the financial stability of companies in various sectors, including infrastructure. According to InfraOne, “in 2020, total lost profit of infrastructure companies was 1.93 trillion rubles” (almost 13% of their annual revenue) [InfraOne, 2020b]. Due to lost profit, more than 10 large industrial and infrastructure companies have already cut their investment programmes [Zhundrikov, Yakunina, 2020], which may result in an increase in the share of public spending on infrastructure development.

Russia does not have a comprehensive system for regular assessment of contingent liabilities, including those related to PPP projects, although such system is being actively developed. The experiences of other BRICS countries in various areas of mitigating risks related to contingent liabilities of PPP projects can prove useful in this endeavour.

A focus on BRICS countries is warranted because every BRICS member has experience with simultaneous application of several measures for mitigating risks related to contingent liabilities, which can be used in Russia’s domestic practices, and because BRICS countries have well-established patterns of cooperation in infrastructure financing and rather recently created a working group on PPPs, which can be used to share members’ experiences.

Thus, the purpose of this study is to assess contingent liabilities of PPPs in Russia and identify main directions for mitigating related risks based on the experiences of Russia’s BRICS partners. It begins with an overview of sources on assessment of contingent liabilities and mitigation of related risks. It then surveys the reasons behind the occurrence of risks related to contingent liabilities, gives an overview of the PPP market in Russia, and discusses sources of data on federal PPP projects. This is followed by a description of the methodology for assessing contingent government liabilities of the federal budget, providing assessment results, and comparing them with assessments of other BRICS members’ contingent liabilities. The main mechanisms for the mitigation of risks related to occurrence of contingent liabilities in Russia and other BRICS countries are analyzed. Conclusions and recommendations are then presented on ways to improve the system of managing contingent liabilities of PPPs in Russia.

## Literature Review

Researchers have produced extensive analysis of budget risks related to PPP projects, as well as potential mechanisms for their mitigation.

In her foundational work on contingent liabilities, A. Cebotari [2008] provided a comprehensive overview of risks related to contingent liabilities of PPPs, mechanisms for managing them, disclosure, and assessment. In particular, she pointed out that full-scale management of contingent liabilities requires the creation of a wide institutional foundation that would comprise the following elements: assessment of the need to assume contingent liabilities; regular monitoring; a system for charging beneficiaries for budget risks; accounting for contingent liabilities as budgetary expenses wherever possible; and disclosure of information under international standards, as well as a precise plan of action when contingent liabilities occur.

A study conducted by the World Bank [Irwin, Mazraani, Saxena, 2018] considered best practices in efficient management of PPP projects and recommended performing a quantitative assessment of risks and potential contingent government liabilities related to PPP projects, as well as publicly disclosing information on costs and risks in PPP projects. Moreover, the study emphasized the importance of developing clear and concise rules for all PPP market participants and reforming the system of budgeting for contingent liabilities to ensure comprehensive accounting for all fiscal expenses. Experts from the World Bank pointed out that governments have more opportunities for managing contingent government liabilities before they move forward with the implementation of a PPP project.

A.D. Andryakov [2018] considered global experience and Russian practices of accounting for and assessing contingent liabilities of PPPs in the budgetary process. Russia uses a cash receipts and disbursements method of accounting, which excludes contingent liabilities (exclusive of government guarantees on private borrowing) from the budgetary process. Andryakov explored international practices in budgeting contingent liabilities of PPP projects and limiting the total volume of liabilities under these projects, which allows for the mitigation of risks arising from the application of cash-based budgetary accounting. He further recommended performing regular assessments of contingent government liabilities, both by project and for all PPP projects in aggregate, and evaluating their effect on Russia's budgetary and debt sustainability.

In its report, the Working Group on Budget Risk Assessment of the Public Council of the Ministry of Finance of the Russian Federation [Ministry of Finance of the RF, 2015] discussed scenarios for adapting to budget shocks and identified the main instruments for mitigating the negative consequences of budget risks. The Working Group recommended improvements to long-term budget forecasting by suggesting the inclusion of a "stress" scenario. The stress scenario must assess potential additional expenses related to an occurrence of contingent government liabilities (including in PPP projects), determine available sources of funding, and prepare budget consolidation options.

In 2020, VEB.RF and the National Center for PPP published a study on international approaches to managing contingent government liabilities in PPP projects [National Center for PPP-VEB.RF, 2020]. Authors of the study pointed out that only at an early stage in the formation of the PPP market can large volumes of private investments be attracted without the need to pursue a systematic state policy on managing contingent government liabilities. At later stages in the formation of the PPP market, most countries use various instruments for managing contingent liabilities. The authors highlighted the following mechanisms for managing contingent liabilities as the most successful practices: using mathematical models for assessing and forecasting the scope of execution as it pertains to contingent liabilities; ranking public partners with the purpose of selecting the most efficient teams to implement PPP projects; establishing caps on the aggregate volume of contingent liabilities both for consolidated and regional budgets; and ensuring the disclosure of information on contingent liabilities assumed by a public party, as well as publishing PPP agreements in the public domain [National Center for PPP-VEB.RF, 2020].

The BRICS PPP Good Practices report, published in 2018 based on the results of South Africa's term as BRICS chair, provided a detailed account of special properties of PPPs in BRICS states [BRICS, 2018]. An International Monetary Fund (IMF) report [2018] also mentioned BRICS countries as being among best with regard to practices for risk mitigation. For example, it gave an extensive description of a Brazilian PPP guarantee fund and South Africa's monitoring of contingent liabilities. A report prepared by the Group of 20 (G20) Trade and Investment Working Group [National Center for PPP-Ministry of Finance of the RF-VEB.RF, 2019] also cited experiences of all BRICS countries.

An IMF study [Bova et al., 2016] contained data on the occurrence of contingent liabilities in 80 developed and developing countries between 1990 and 2014. During this period, these countries on average encountered two occurrences of contingent liabilities. As for Brazil, every five or six years it sees a major occurrence of contingent liabilities that leads to unexpected budget expenses averaging 8.3% of GDP. China reported approximately 10 occurrences of contingent liabilities with an average fiscal cost of 4.7% of GDP for the public party. The IMF database contains a relatively small number of contingent liability occurrences in PPP projects, owing to the fact that only cases with a fiscal cost exceeding 0.2% of GDP were included in the database. Sporadic insolvencies of PPP projects typically result in insignificant budget costs. According to the study, the average cost of the occurrence of contingent liabilities in PPPs is 1.2% of GDP, and in some cases, it is as high as 2.0% of GDP. But the number of PPPs has only recently started to increase noticeably on a global scale, and relevant budget expenses may increase dramatically in the future.

A Eurodad report [Romero, 2018] listed 10 occurrences of contingent liabilities in PPPs, two of them linked to India (a project on increasing the water supply in Khandwa and a project on building power stations in Mundra). In particular, the project targeting the construction of coastal coal-fired power plants at a major Mundra port (the Tata Mundra Ultra Mega Power project) became cost prohibitive<sup>2</sup> due to an increase in the price of imported coal. The project's accumulated losses (as of 31 March 2017) were recorded at \$948 million, with an outstanding long-term loan in the amount of \$1.49 billion. In 2019, Tata Power made an offer to the government to buy 51% of shares and provide assistance to the project as a private partner. An increase in electricity tariffs was officially approved in April 2019, but that proved insufficient to ensure feasibility for the Tata Power plant in Mundra. In March 2020, the private and public parties signed a consensus statement at a meeting with the minister of power [Singh, 2020]. The government conceded the payment of an indemnity to the private partner and was forced to assume the larger part of responsibility for the project's losses.

## Contingent Liabilities of PPP Projects and Related Risks

A state's budget liabilities comprise direct and contingent liabilities. Direct liabilities are budget obligations reflected in an agreement and are not contingent upon the occurrence of any events as long as the private party fulfils contractual obligations [National Center for PPP-VEB.RF, 2020, p. 5]. Direct government liabilities related to PPP projects include financing capital grants to a private partner, as well as remitting the availability payment once the project is operational.

Contingent liabilities are obligations that do not arise unless particular, discrete events occur in the future [IMF, 2011]. As noted above, contingent liabilities can be explicit and implicit. Explicit government liabilities are defined by the terms and conditions of a contract. Such lia-

<sup>2</sup> The project was supposed to run on Indonesian coal, but in 2010 the Indonesian government decreed that coal could be exported only at prices linked to global rates. As the Supreme Court effectively struck down the compensatory tariff, Tata Power sustained great losses.

bilities on PPP projects include compensatory payments to a private partner upon the termination of a contract and obligations on various types of guarantees in PPP infrastructure projects (for example, guarantees of a private partner's minimum income, guarantees against the risk of a drop in demand for services, or guaranteeing a private partner's debt). Implicit contingent liabilities are not legally mandated and come instead from government obligations based on the significance of the project to the public. Implicit liabilities on PPP projects include financing a private party's debt that is not guaranteed by the government, providing an additional loan for the repayment of obligations, or executing a total buyout of a private partner in case of default.

Typically, occurrences of contingent liabilities happen during a crisis and lead to a significant deterioration of the general fiscal balance and an increase in the debt-to-GDP ratio [Bova et al., 2016]. A detailed study of factors that trigger the occurrence of contingent liabilities indicates that even when systemic crises are controlled, business cycles play a major part in determining the occurrence of contingent liabilities. The IMF study [Bova et al., 2016] concluded that occurrences of contingent liabilities typically follow periods of high growth and coincide with periods of low growth. Consequently, they exert a negative effect on state finances precisely when the budget is already experiencing considerable pressure. Thus, the study emphasized the importance of measures on mitigating budget risks and ensuring efficient management of implicit government liabilities during inter-crisis periods.

Even though occurrences of contingent liabilities tend to surface predominantly during economic crises, they can be also observed in other instances. Sometimes contractual obligations need to be revised, and this leads to the occurrence of government liabilities in PPP projects. Reasons behind the need for such revisions include unsatisfactory terms of the original contract (terms and conditions that are too favourable for or too disadvantageous (such as an expensive project design) for a private investor), incorrect assessment of demand on the result of project implementation (particularly relevant for toll roads), and opportunistic behaviour (contractor proclivity for underestimating the price of services at the auction stage and low quality of services rendered).

A rather wide array of instruments is used to mitigate risks related to the occurrence of contingent liabilities. These are considered below.

## The Current State of Public-Private Partnerships in Russia

As of the end of 2020, Russia had 3,459 PPP projects (at different stages in their implementation) with the total volume of public and private investments reported at approximately 4.5 trillion roubles (4.2% of GDP) [Rosinfra, 2020]. The structure of existing agreements is as follows: the majority of contracts are made at the municipal level (94%), and the largest contracts are signed at the federal level (42% of investments go to federal projects) [Ministry of Economic Development of the RF, 2020]. Indeed, Russia currently has 1,324 active contracts with investments under 1 million roubles due to a large number of concessionary agreements in the utilities and public amenities segment.

These indicators are on par with some other developing countries (for example, they are commensurate with Brazil in terms of the number of projects and GDP ratio) or lower. In China and India, the ratio between investments into PPP projects and GDP exceeds 10% (Table 1). China demonstrates the highest volume of investments in PPPs due to the fact that regional and municipal authorities are actively using this mechanism to reduce the debt load on respective budgets.

Table 1. PPP Development in BRICS, 2019

	Brazil	India	China	Russia	South Africa
Number of Projects	2,240	1,824	9,440	3,601	121 <sup>3</sup>
Total Investment (\$ Billions)	32	350	2,229	53	28
Memo					
% of GDP	2.5	12.2	14.3	3.5	7.8

Source: Brazil [RadarPPP, 2019]; China [CPPPC, 2019]; Russia [Rosinfra, 2019]; India [Infrastructure India, n. d.]; South Africa [PPP Knowledge Lab, n. d.].

Note. The data given in the table are for 2019 for comparison purposes, despite the availability of 2020 data for some countries.

Since federal projects account for the bulk of investments and government liabilities in Russia, this study predominantly focuses on assessing risks related to such projects. Moreover, according to Andryakov [2018], analysis of issues with accounting for contingent liabilities of PPP projects is rather telling, particularly at the federal level, because “in methodology, especially budget methodology, subfederal authorities replicate the federal level.” Russia is currently implementing 32 federal projects that employ the public-private partnership mechanism: 25 in transportation (Figure 1), four in social services, two in information technology (IT) infrastructure, and one in national security and defence. The largest share of transportation projects (21 projects) is in the automotive segment, and railroad infrastructure is in second place with four projects. The total implementation cost of these projects is 1.8 trillion roubles: 1.2 trillion roubles for construction of highway infrastructure, 0.6 trillion roubles for railroad infrastructure, and 34.7 billion roubles for information systems on motorways.

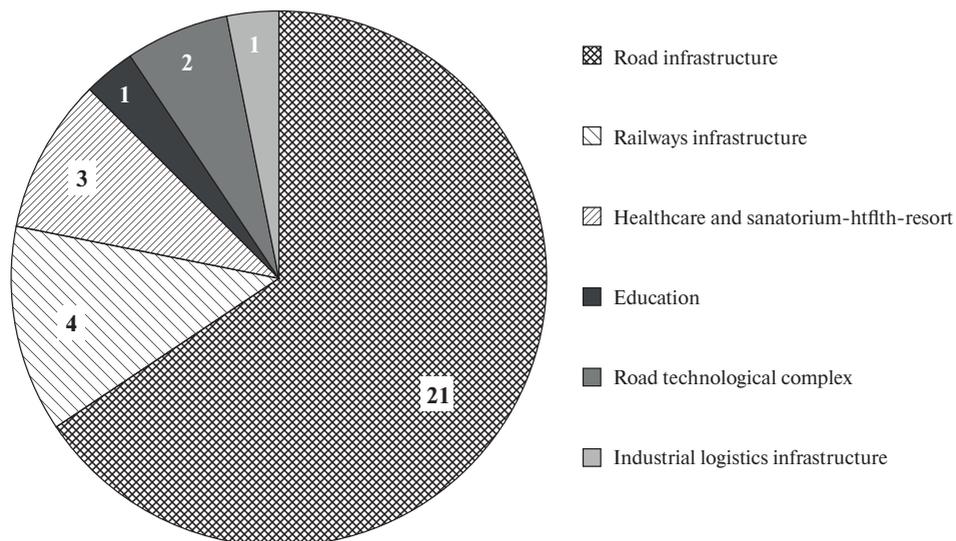


Fig. 1. Federal PPP Projects by Sector, Number of Projects

Source: [Ministry of Transport of the RF, n. d.; Rosinfra, n. d.].

<sup>3</sup> This includes 87 active [GTAC, 2019] and 34 closed [National Treasury of the RSA, 2019e] projects.

In the public domain, on the websites of Rosavtodor Federal Road Agency, the Government of the Russian Federation, and the Unified Information System in the Field of Procurement, texts of agreements are available containing information on parties' fiscal obligations, which allow for an assessment of contingent government liabilities on 21 projects: 14 motorway projects, three projects in railroad construction, two in healthcare, one in manufacturing and logistics, and one project on technological complexes for motorway facilities. Total investment into these projects during the construction stage is an estimated 1.2 trillion roubles (prices for the year concerned), or approximately 25% of total investment into ongoing PPP projects. At the operational stage, total concession grantor payment on these projects will be 547 billion roubles (prices for the year concerned). Thus, the total cost of 21 PPP projects under consideration will be 1.7 trillion roubles over the entire period of their implementation.

## Quantitative Assessment of Contingent Government Liabilities on Federal PPP Projects

This study assesses direct and explicit contingent government liabilities on 21 projects. Analysis of available statistical data on Russia's federal PPP projects considered herein indicates that information for many projects is either unavailable or incomplete. For example, tender documentation, concessionary agreements, or long-term investment contracts for PPP projects in the operational stage are often not available in the public domain, which complicates the collection of data on such direct government liabilities as concession grantor payments. It is also necessary to point out the fragmented nature of available data on government guarantees provided by the Russian Federation to private parties under the umbrella of PPP project implementation. That is why it can be assumed that the actual volume of direct and contingent government liabilities dramatically exceeds estimates.

Aggregate government liabilities on federal PPP projects are assessed in three stages. At the first stage, direct government liabilities for each project under consideration are analyzed. Direct government liabilities comprise subsidies from the federal budget (capital grants and concession grantor payments) and investments of the National Wealth Fund (NWF). The following assumptions were made during the assessment of direct liabilities: first, equal distribution of investments in the absence of capital investment splits by year;<sup>4</sup> second, in calculations of operational and investment payments, inflation over the projection period was set to the target rate established by the Bank of Russia (4%).

At the second stage, contingent government liabilities are assessed for each project. For the purposes of this study, only the volume of explicit liabilities is calculated, which includes Russia's guarantees and the guarantee of minimum income. Assessment of the scope of implicit contingent liabilities warrants a separate approach with the application of methods of mathematical modelling. For the majority of projects under consideration, this is impossible due to the absence or fragmented nature of data available in the public domain. Assessments of government liabilities on all projects are subsequently consolidated. Over the period from 2021 to 2052, the total volume of government liabilities related to the implementation of public-private partnership projects will constitute an estimated 3.1 trillion roubles, whereas direct liabilities (capital grants and concession grantor payments, as well as NWF funding) will account for

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<sup>4</sup> Assumptions were used in the following projects: Concessionary Agreement Regarding Healthcare Facility "Eye Microsurgery Center in Ekaterinburg" [Government of the RF, 2017], Concessionary Agreement Regarding Railway Transport Facilities 79 KS, and Concessionary Agreement Regarding Healthcare Facility [Government of the RF, 2015b].

0.8 trillion roubles, and contingent liabilities (Russia's guarantees and guarantee of minimum income) will amount to 2.3 trillion roubles (Table 2).

Table 2. PPP Liabilities of the Federal Budget, 2019–52, ₺ Billions

Liabilities	2019	2020	Total 2021–52
<i>Total budget liabilities</i>	<i>130</i>	<i>123</i>	<i>3,080</i>
Direct liabilities	81	86	810
Federal subsidies	41	50	769
Capital grant	5	12	2
Concession grantor payments	36	38	766
National wealth fund	40	36	215
Contingent liabilities	49	50	2,270
Guarantee of minimum income (maximum volume in case of the absence of the traffic)	12	13	2,233
Public guarantee of the Russian Federation	37	37	37

*Source:* Authors' calculations based on 21 federal agreements (concessional agreements, long-term investment treaties).

Assessment of contingent government liabilities on federal PPP projects accounts for state guarantees on bond loans for two motorway projects and guarantees of minimum income (reimbursement of lost income) in two railroad projects. For example, Russia's government guarantee secures bonds with par value of 25.5 billion roubles. These bonds were issued to implement the project on building the kilometre 15–58 segment of the M-11 Moscow-St Petersburg highway. The state guarantee is also stipulated for the issuance of bonds related to the implementation of the New Exit onto the Moscow Ring Road from M-1 Belarus Highway project. The entire bond issue in the amount of 8.2 billion roubles is currently in circulation.

Guarantees of minimum income are provided to concessionaires in two federal PPP projects: Financing, Construction, and Operation of Public Railway Transport Line "Obskaya-Salekhard-Nadym"; and Financing, Creation, and Operation of Railway Transport Infrastructure Facilities of Public Railway Line "Elegest-Kyzyl-Kuragino".<sup>5</sup> In these two projects, reimbursement comprises load-based and tariff components. But the first contract ("Obskaya-Salekhard-Nadym") stipulates a cap on the public partner's guarantee in the amount of 12.8 billion roubles [Government of the RF, 2018a]. Given that the term of project implementation is 35 years, and the term of construction is five years, the total maximum government guarantee (assuming the absence of traffic) for the entire project term constitutes 383.7 billion roubles. The second contract ("Elegest-Kyzyl-Kuragino") [Government of the RF, 2018b] does not specify a cap on the guarantee, so the maximum guarantee was calculated as the concessionaire's total revenue from freight services over the entire term of project implementation. Thus, assuming the absence of traffic, the maximum government guarantee of minimum income for this project is 972 billion roubles.

<sup>5</sup> Even though on 29 March 2021 the Russian government put the concession for the construction of Kyzyl-Kuragino railway line on hold for up to five years, assessments on this project are included because contingent liabilities until 2052 are considered.

The overall estimate of all government liabilities on projects under consideration constitutes 4 trillion roubles over the period from 2009 to 2052 and 3 trillion roubles over the projection period from 2021 to 2052, whereas contingent liabilities account for almost three quarters of all liabilities. According to InfraOne, in 2019, off-balance sheet liabilities on PPPs and concessions were 560 billion roubles for budgets of all levels [InfraOne, 2020a]. In this study, federal contingent liabilities amounted to 49 billion roubles (Table 2). Such discrepancy in assessments is related to calculation methodology and project selection. First, InfraOne does not specify what liabilities it considers as off-balance sheet liabilities; and, perhaps, it does not include all contingent liabilities and accounts only for state guarantees. Second, InfraOne includes state guarantees for budgets of all levels as opposed to the federal level considered herein, which results in a major discrepancy in assessments.

In general, the level of contingent liabilities on federal PPP projects in Russia (0.1% of GDP) does not exceed the level of other large developing countries. For example, in South Africa, according to its national treasury assessments, the volume of contingent liabilities related to PPP projects for budgets of all levels varied from 0.1% to 0.2% of GDP in the fiscal year 2019/2020. According to assessments of the IMF, Brazil's contingent liabilities on PPP projects constituted 1.1% of GDP in 2014, and liabilities of budgets of all levels on PPP projects in China amounted to 0.5% of GDP in 2019. Presently, Brazil has the highest level of contingent liabilities related to PPP projects, while South Africa has the lowest due to, first and foremost, the small number of implemented projects compared with other BRICS countries.

## Mechanisms for Mitigating Budget Risks Related to Implementation of PPP Projects

International practice suggests 10 instruments for monitoring and mitigating budget risks related to PPPs [National Center for PPP-VEB.RF, 2020], and Russia has the regulatory and technical framework for implementing seven of them (Table 3).

Russia, China, South Africa and India stipulate *project approval by fiscal authorities*. In Russia, approval is done in accordance with Federal Law No 224-FZ, Article 10.5: "If funds of the budgetary system of the Russian Federation are planned to be used in the course of project implementation, the decision on project implementation shall only be taken on condition that the use of such funds complies with federal laws and/or other regulatory legal acts of the Russian Federation, laws and/or other regulatory legal acts of the Russian Federation's constituent entities or municipal legal acts" [Federal Law of 13 July 2015 No 224-FZ], which de facto requires the approval of the federal or regional ministry of finance.

In China, project approval is the main mechanism for mitigating risks related to PPPs. All PPP projects in China are accumulated, considered, and approved by ministries of finance of different levels [Ministry of Finance of the PRC, 2014]. In South Africa, PPP projects go through a multi-tiered approval process with the national treasury [National Treasury of the RSA, 2019]. The treasury's Financial and Fiscal Commission also partakes in project approval by assessing a project's contingent liabilities. In India, the ministry of finance is almost exclusively responsible for approving PPP projects, but some projects are also considered by the committee on infrastructure. The Public Private Partnership Appraisal Committee (PPPAC) performs additional screenings for PPP projects valued over 1 billion rupees [Comptroller and Auditor General of the ROI, 2009].

Russia, China, South Africa and, to some extent, Brazil *assess fiscal consequences of project implementation*. Such assessment may involve not only an evaluation of required investment and size of liabilities (Russia, China, South Africa) but also an assessment of potential

Table 3. Risk Reduction Instruments Related to the Contingent Liabilities of PPPs in BRICS

<b>Instrument</b>	<b>Country</b>	<b>Implementation</b>
Project approval by fiscal authorities	China	Operational Guidelines for Public-Private Partnership Mode
	Russia	224-FZ, p. 10.5
	South Africa	Treasury Regulation 16 to the Public Finance Management Act, 1999
	India	Public Private Partnerships (PPP) in Infrastructure Projects. Public Auditing Guidelines
Assessment of fiscal consequences of project implementation	China	Guidelines for the Financial Affordability Assessment of the PPP Projects
	Russia	Resolution No 1514 of the Government of the Russian Federation of 30 December 2015
	Brazil	The Brazilian Fiscal Responsibility Law
	South Africa	Public Private Partnership Manual (National Treasury)
Methodological recommendations on managing contingent liabilities and PPP risk	China	Guidelines for the Financial Affordability Assessment of the PPP (2015) Operational Guidelines for Public-Private Partnership Mode (2015) Implementation Opinions on Promoting Regulated Development of Public Private Partnerships (2019) Operation Guideline for Performance Management of PPP Projects (2020)
	Russia	Sample agreement forms
	South Africa	Public Private Partnership Manual (National Treasury)
	India	Estimation of Contingent Liabilities from PPP- User Manual for Online Toolkit
Disclosure of information on the size of contingent liabilities in fiscal reports and analytical publications	Brazil	The Brazilian Fiscal Responsibility Law
	Russia	Monitoring of the Ministry of Economic Development
	South Africa	Budget Review (National Treasury)
Monitoring of contingent government liabilities of PPPs	Brazil	The Brazilian Fiscal Responsibility Law
	China	China Private Public Partnerships Center
	Russia	Rosinfra database, State Automated Information System "Management" (GASU)
	South Africa	Government Technical Advisory Centre (GTAC) National Treasury
	India	Public Private Partnerships (PPP) in Infrastructure Projects. Public Auditing Guidelines
Guarantee funds	Brazil	Infrastructure Guarantee Fund

Instrument	Country	Implementation
Reporting contingent liabilities as a separate budget entry	South Africa	Budget Review (National Treasury)
Caps on contingent liabilities	Brazil	PPP Law (No 11, 709, 2004)
	China	Guidelines for the Financial Affordability Assessment of the Public-Private Partnership Projects
	India	Public Private Partnerships (PPP) in Infrastructure Projects. Public Auditing Guidelines
Publishing of the PPP agreements in the public domain	Russia	Russian highways website, Russian government website, Russian public procurement website
	Brazil	Websites of public partners: Planning and Logistics Company (EPL), National Agency of Ground Transport (ANTT), Investment Partnership Programmes, Fund of Support and Structuring of Concessions and PPP Projects (FEP CAIXA)
	China	China Private Public Partnerships Center
	South Africa	E-Tender website, National Treasury
	India	Infrastructure India database

*Source:* Compiled by the authors.

revenue (Brazil), as well as credit risk assessment (China, South Africa). Russia's assessment of liabilities accounts for the size of liabilities assumed by a public partner if risks emerge during project implementation and execution of a government (municipal) contract [Government of the RF, 2015a]. Still, the risk assessment methodology approved by Order No 894 of the Ministry of Economic Development of the Russian Federation of 30 November 2015 [2015a] applies only to PPP projects that are implemented based on 224-FZ. It does not officially apply to concessionary agreements, even though in 2016 the Ministry of Economic Development of the Russian Federation planned to approve recommendations on such assessments [2018]. The methodology also does not apply to other existing agreement formats (long-term investment agreements, owner-operator contracts, life cycle contracts).

In China, assessing expenses for budgets of all levels includes the following types of direct and contingent liabilities: investments, operational subsidies, risks, and supporting investments (such as for land purchase) [Ministry of Finance of the PRC, 2015]. In South Africa, assessment of fiscal consequences of PPP projects, including payments and liabilities (comprising contingent liabilities), is part of the annual budget review, which has an appendix on PPP projects (Annexure E). The Annexure contains the following information on PPP projects [National Treasury of the RSA, 2019]:

- updates on completed PPP projects<sup>6</sup> and the list of PPP projects under review;<sup>7</sup>

<sup>6</sup> Published information includes information on the financing department, private partner, type of the project, financing, and present value for the government.

<sup>7</sup> In addition to the list of the projects, there is a detailed description of each project and its perspectives.

- estimated unitary payments on PPPs in operation over the Medium Term Expenditure Framework (MTEF) period by sector (transport, accommodation, health, and correctional services facilities);
- level of potential government contribution to contingent liabilities on PPPs in operation for the preceding fiscal year and the next fiscal year.

It seems fair to say that, of all BRICS countries, South Africa publishes the broadest data on PPP projects in the public domain.

China, South Africa, India and Russia have published *methodological recommendations on managing contingent liabilities and PPP risks*. These recommendations vary among BRICS members by type and content from best practices (South Africa) to sample agreement forms (Russia) and an instrument for voluntary assessment of contingent liabilities (India). For example, Russia provides recommendations in the form of sample concessionary agreements. Indeed, sample texts, albeit not mandatory, contain recommendations on splitting risks between public and private partners, so they may be deemed an instrument for mitigating risks, along with best practices on splitting risks [Global Infrastructure Hub, 2016]. Sample agreements have the same structure and contain the same concession grantor liabilities and risks, but they do reflect the main risks and liabilities of a concession grantor that are typical of PPP projects. In China, methodological recommendations are effectively mandatory and target project standardization, tighter control over project implementation, and mitigation of risks related to PPPs. For example, its ministry of finance issued the Implementation Opinions on Promoting Regulated Development of Public Private Partnerships, which impose limitations on the implementation of user charge projects where the share of the charge is below 10% [Ministry of Finance of the PRC, 2018], and the operational guidelines for the evaluation of PPP projects regulate the full life cycle of projects [Ministry of Finance of the PRC, 2020]. In South Africa, methodological recommendations cite best practices for every stage of a project's cycle [National Treasury of the RSA, n. d., a].

India developed a web-based application tool, entitled the Contingent Liability Management System (CLMS), designed to estimate contingent liabilities in PPP projects at various stages of their implementation. The tool comes with a user manual [Government of India, n. d.], which serves as a guide for ministries, governments, and project authorities in measurement, recognition, and disclosure of contingent liabilities arising from their respective PPPs. The tool is a browser-based application. It uses an inbuilt system that is aligned to various provisions relating to termination risks and termination payments under concession agreements.

Brazil, Russia and South Africa *mandate disclosure of information on the size of contingent liabilities in fiscal reports and analytical publications*. Under Brazil's Fiscal Responsibility Law [2020], the Budgetary Guidelines Law must include an assessment of contingent liabilities. At the same time, the latter document does not contain a detailed assessment of liabilities related to PPP projects due to the absence of such liabilities at the federal level. For example, the 2020 budget indicates that administration has only one PPP project at the federal level, and "since the companies involved are not affiliated with the federal government, and no guarantee was provided under the contract by the concession grantor to the concessionaire, there are no risks transferred to the federal budget" [Ibid.].

The National Treasury of South Africa publishes an annual budget review, which contains an annexure on public-private partnerships [National Treasury of the RSA, 2019]. It provides an overview of contingent government liabilities on PPP projects at the following levels: federal government, provinces, municipalities, and public entities. Contingent liabilities on PPP projects are categorized depending on whether a contract is terminated as a result of private sector default, government default, or force majeure (an event beyond either party's control).

Russia stipulates disclosure of information on the size of contingent liabilities in analytical publications. According to the Order of the Ministry of Economic Development of the Russian Federation [2015b], consolidated results of PPP project monitoring should be published annually. The first monitoring results were published in February 2020 and contained information on the total number of ongoing projects, the list of largest projects, total investments, and off-balance sheet liabilities. Moreover, the Accounts Chamber of the Russian Federation publishes the results of some projects' audits.

Officially, all BRICS countries are supposed to *monitor contingent government liabilities of PPPs*. But the only BRICS member that ensures comprehensive and regular monitoring is South Africa, where monitoring and consulting support for PPP projects is provided by the Government Technical Advisory Centre (GTAC). The South African Government closely monitors each party's performance against their contractual obligations and enforces tight regulatory requirements [National Treasury of the RSA, 2019]. The GTAC regularly publishes information on PPP projects under review and completed projects.

In Russia, Federal Law 224-FZ has a clause that mandates that the government agency duly authorized to carry out the assessment must publish assessment results on the agency's official website in the form of a report on project efficiency and its comparative advantage. For federal PPP projects, the duly authorized government agency is the Ministry of Economic Development. Russia currently lacks a comprehensive system for monitoring government liabilities related to PPPs, albeit there are several platform solutions. For example, according to statutes and regulations (Order No 888) [Ministry of Economic Development of the RF, 2015b], information on ongoing PPP contracts must be submitted to the State Automated Information System "Management" (GASU). But GASU is not available to the public, so it is impossible to assess the quality and quantity of information contained therein. Public information on PPP projects is available in the Rosinfra database on PPP projects [Rosinfra, n. d.], but this resource cannot be used to assess contingent liabilities related to PPP projects because the only financial indicator provided for each project is the total investment in project implementation.

As for China, the website of the China Private Public Partnerships Center publishes daily reports on the number of ongoing projects. These reports provide information on the total investment and assess fiscal responsibility of regional and municipal budgets. Fiscal responsibility comprises both direct expenses of respective budgets (investments, operational subsidies) and contingent liabilities (risks and additional expenses). Thus, China assesses contingent liabilities, but does not publish a separate assessment in the public domain. According to this estimate, total (direct and contingent) government liabilities constitute 503 billion yuan (\$78 billion) [CPPPCC, 2019], or 0.5% of China's GDP.

Brazil, as already noted, stipulates mandatory publication of the size of contingent government obligations in an appendix to the national budget, which can be also regarded as monitoring.

Brazil created a special *guarantee fund*. The government contributes to the fund up to 11 billion reais as its guarantee against risks related to the implementation of infrastructure projects [ABGF, n. d.]. Moreover, in 2016 Brazil launched an investment partnership programme, which provides public partners with an opportunity to receive technical assistance with the structuring of PPP projects [Federal Government of Brazil, n. d.]. The fund is managed by the Brazilian Development Bank (BNDES). In 2017, Federal Law No 13.529 decreed the creation of the Federal Fund for Concessions and PPPs (FEP CAIXA) [Caixa, n. d.], which allows for obtaining additional funding for technical assistance. This fund is administered by state-owned Brazilian bank Caixa Econômica Federal. Its focus is geared toward facilitating the development of municipal projects, while the BNDES fund targets concessions at the federal level.

South Africa's budget pre-emptively allocates funds to cover its contingent liabilities *as a separate budget entry* (contingency reserves). Such mechanism for securing contingent liabilities is one of the most advanced practices for managing contingent liabilities in the budgetary process.

Brazil, China and India introduced *caps on contingent liabilities*. In Brazil, payments from the federal budget are capped at 1% of its revenue, and the cap is set to 5% of revenue at the regional level [IMF, 2017].

In China, the share of PPP-related liabilities cannot exceed 10% of the national budget's expenses in any given year. China identifies public partner liabilities, estimates related expenses, and then assesses budget capacity, that is, total budget expenses at the respective level. The latter assessment uses mean values and average growth rates over the past five years [Ministry of Finance of the PRC, 2015].

For India's PPP projects, the aggregate of total annuity liabilities on a grant for the next five years shall not exceed 25% of operating expenses stipulated under the Five Year Plan for the grant. Such a cap ensures control over budget expenses related to the execution of contingent liabilities.

All BRICS countries *publish executed PPP agreements in the public domain*. They can be published on tender websites (Russia, South Africa [National Treasury of the RSA, n. d., b]), websites of specialized companies (such as Avtodor in Russia), websites of government agencies working in infrastructure (Russia [Government of the RF, n. d.], Brazil), and websites of support funds (Brazil), as well as websites dedicated exclusively to PPPs (China [CPPPC, n. d.], India [Infrastructure India, n. d.]).

In Russia, the most comprehensive publicly available information is provided for projects on road infrastructure, such as the construction of the Central Ring Road that is posted on the website of Avtodor [n. d.]. The investment projects page lists projects at various stages of implementation (initial planning, tender, construction, and operational activity). The investment tenders page provides tender documentation of relevant projects, including information memoranda and results of public technological and pricing audits.

Still, most countries provide fragmented information and do not have a unified database that contains all agreements and data on executed contracts.

## Conclusions and Recommendations

The PPP market is actively developing in Russia and worldwide. In Russia, the cumulative number of projects has increased from 2,800 to 4,600 since 2016, and investment volume went from 2.3 billion roubles in 2016 to 4.6 billion roubles in 2020. Due to the urgency of implementing national projects and creating a structure for financing them (for example, the Comprehensive Plan for Modernization and Expansion of Trunk Infrastructure intends to attract more than half of the total 6.3 trillion rouble investment from non-government sources<sup>8</sup> [Government of the RF, 2018c]), in the near future we can expect an increase in financial spending and risks related to PPP projects for budgets of all levels. Simultaneous increases in risks and liabilities requires a systematic state policy on managing contingent government liabilities [Andryakov, 2018].

This study suggests an assessment of contingent liabilities on 21 federal PPP projects that account for approximately 25% of total investments into PPP projects in Russia. The volume of contingent liabilities in 2021–52 (the period for project implementation) is 2.3 trillion roubles, which is less than in other developing countries. But this volume can increase dramatically

<sup>8</sup> Without energy as part of the plan.

as Russia proceeds with the implementation of its national projects, including infrastructure projects. Further studies can be scaled up by incorporating the assessment of regional projects, as well as the assessment of implicit government liabilities with the application of methods of mathematical modelling.

Even though Russia currently has the foundation for using seven tools from those suggested by international best practices for monitoring and mitigating budget risks related to PPP projects (exclusive of a guarantee fund and having a separate line on contingent liabilities in the national budget), we need to improve on all existing tools in order to secure comprehensive management of budgetary risks. First, we must ensure information transparency, which stipulates regular updating, uploading, and expanding the number of available financial indicators for PPP projects. In the process of improving its systems for managing contingent liabilities and related budget risks, Russia can draw on the experiences of other developing countries that face similar issues, including its BRICS partners.

The peculiarity of the Russian PPP market lies in the large number of small regional projects and a small number of large federal projects, the latter of which bear the highest budget risks. That is why Russia is interested in various aspects of every BRICS member's experiences. For example, India is a leader in operational assessment of projects, which will facilitate the assessment of the many small PPPs. China has a well-organized system for project approval by fiscal authorities, which can be also actively used in getting approvals for regional PPPs. The Brazilian experience with a guarantee fund can be useful for reducing the load on regional budgets, and the South African system for managing contingent liabilities that works well for a small number of projects can be used at the federal level for large PPPs. Thus, given the established foundation and other countries' experiences, Russia has an opportunity to deploy a comprehensive system for monitoring and managing contingent PPP liabilities before the growth of the public-private partnership market engenders major budget risks.

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