Options to Improve the Incorporation of PPPs into Debt Sustainability Analyses

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Outline of the Presentation

I. Introduction

II. Accounting standards of PPPs: SNA; Eurostat; IPSAS;

III. Fiscal Risks and Accounting: IMF

IV. Options to Improve Incorporation of PPPs risks into DSAs
I. Introduction

Motivation

• Hidden deficits (Kharas and Misra, 2001; Irwin, 2011; IMF 2011, forthcoming):
  – Mismatches debt-deficits (one-off operations below the line)
  – Eurostat, IMF “re-link” (stock-flow adjustments), but discrepancies, including because of accounting stratagems

• Increased awareness of PPPs’ impact on fiscal sustainability
  – Attempt to offset lower public investments during crisis
  – PPPs often ignored in public books (“Accounting Gimmicks”) leading to apparently sustainable debt until a crisis occurs
  – Markets can however perceive the real fiscal vulnerabilities

• How to align debt and deficits and report right debt outlook?
II. Accounting standards of PPPs


• Based on economic ownership
  – PPP in fiscal accounts if government bears risks and reaps rewards of ownership of asset
  – PPP indistinguishable from traditional public investment, except for differences in time profile of cash payments

• Ignored in fiscal accounts if not considered public
II. Accounting standards of PPPs

Eurostat decision

• Private investment if private partner bears most construction risk, and either most availability risk or demand risk.

• Simple rule

• Considerable concerns:
  – Projects being done as PPPs to classify them as private.
  – Projects that are well suited for PPPs are designed sub-optimally so they can be classified as private.
  – Contingent liabilities for the public sector pile up from investments that are not on the public sector’s books.
  – Budgetary rigidities are created, as future revenues are in fact being pre-committed, without this being evident.
II. Accounting standards of PPPs

IPSASB

• Standard for Service Concession Arrangements, based on control approach:
  – Regulation and fee/price setting powers, choice of beneficiaries; and
  – Control—e.g., through ownership—of any residual interest at end of the term of the arrangement.

• Would put virtually all PPPs on public books because, in most PPP contracts:
  – Public entity influences contractually at least the kind of services that must be provided; and
  – Price received by operator for service provision (shadow toll) is regulated in contract.
III. Fiscal Risks and Accounting: IMF

Unbundle components of risks ...

• Traditional approach is binary; attributes asset to one partner based on:
  – Risks and/or reward (Eurostat, GFS);
  – Access to (future) benefits and exposure to risks (UK)
  – Control (through ownership or regulation) the assets (IPSASB)

• IMF approach (2006) seek to unbundle components:
  – Conceptually appealing
  – Requires quantification of risks and rewards, and splitting the value of assets and liabilities to private and public sector partners
  – Challenging to implement: involves significant value judgment
III. Fiscal Risks and Accounting: IMF

...while mitigating potential moral hazard through...

- Emphasis on comprehensive disclosure of known and potential future costs of PPPs for public finances

- Incorporation of costs (as primary spending) into Debt Sustainability Analysis
  - Future payments by government under PPP contracts; and
  - expected payments under called guarantees
III. Fiscal Risks and Accounting: IMF

Comprehensive disclosure:

• For each PPP project/sector, information should be provided on:
  – Future expected or contingent payment/revenue stream up to over 20 years
  – Terms of project that may affect amount, timing, and certainty of cash flows
  – Extent of rights/obligations to use/provide specified assets’ services
  – Arrangements after concession period, including on renewal and termination
  – Any preferential financing through on-lending or public financial institutions.
  – Any project financing or off-balance sheet elements such as contingent liabilities provided by entities owned or controlled by government.

• Whether PPP assets (or any part thereof) are recognized on balance sheet of any SPV, or in private partner’s statements.
III. Fiscal Risks and Accounting: IMF

Debt Sustainability Analysis:

- **For PPPs that are classified as private:**
  - Primary spending: Future payments by the government under PPP contracts and expected future costs of guarantees.
  - Potential costs of contingent liabilities: explore with multiple scenarios and stress tests.

- **For PPPs that are classified as public:**
  - Investment is public spending and its financing is public debt.
  - Separate future government payments into its economic components
    - Primary spending: services provided on an ongoing basis;
    - Cost of financing is Interest spending;
    - **Work with multiple scenarios.**
IV. Options to Improve Incorporation of PPPs risks into DSAs

Implicit or contingent liabilities are often not reported in DSAs

Appendix Table I.2. Country: Public Sector Debt Sustainability Framework, 2006–16

(Percent of GDP, unless otherwise indicated)

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<tr>
<td>Baseline: public sector debt 1/</td>
<td>20.8</td>
<td>8.3</td>
<td>11.6</td>
<td>11.1</td>
<td>16.0</td>
<td>15.8</td>
<td>13.2</td>
<td>-0.9</td>
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<tr>
<td>Change in public sector debt</td>
<td>-1.2</td>
<td>-0.8</td>
<td>2.8</td>
<td>-0.5</td>
<td>4.9</td>
<td>-1.2</td>
<td>-1.2</td>
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<tr>
<td>Identified debt-creating flows (4+7+12)</td>
<td>0.7</td>
<td>-0.5</td>
<td>0.7</td>
<td>0.2</td>
<td>-0.8</td>
<td>0.1</td>
<td>0.2</td>
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<tr>
<td>Primary deficit</td>
<td>1.3</td>
<td>0.3</td>
<td>-0.8</td>
<td>-0.2</td>
<td>-1.4</td>
<td>0.2</td>
<td>1.2</td>
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<tr>
<td>Automatic debt dynamics (xrate and r-g)</td>
<td>-2.1</td>
<td>-1.9</td>
<td>-1.1</td>
<td>-2.2</td>
<td>-0.6</td>
<td>-1.3</td>
<td>-2.1</td>
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<tr>
<td>Contribution from interest rate/growth differential 3/</td>
<td>-2.9</td>
<td>-1.9</td>
<td>-1.1</td>
<td>-2.2</td>
<td>-0.6</td>
<td>-1.3</td>
<td>-2.1</td>
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<tr>
<td>Contribution from exchange rate depreciation 4/</td>
<td>0.7</td>
<td>0.0</td>
<td>0.0</td>
<td>...</td>
<td>...</td>
<td>...</td>
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<td></td>
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<tr>
<td>Other identified debt-creating flows</td>
<td>1.6</td>
<td>1.1</td>
<td>2.7</td>
<td>2.6</td>
<td>1.2</td>
<td>1.2</td>
<td>1.0</td>
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<tr>
<td>Privatization receipts (negative)</td>
<td>0.1</td>
<td>0.1</td>
<td>2.0</td>
<td>1.0</td>
<td>1.2</td>
<td>0.2</td>
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<tr>
<td>Recognition of implicit or contingent liabilities</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<td>Residual, including asset changes (2-3) 5/</td>
<td>-1.9</td>
<td>-0.4</td>
<td>2.1</td>
<td>21.3</td>
<td>32.7</td>
<td>33.2</td>
<td>28.7</td>
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<tr>
<td>Public sector debt-to-revenue ratio 1/</td>
<td>22.7</td>
<td>17.4</td>
<td>23.2</td>
<td>5.3</td>
<td>3.3</td>
<td>4.3</td>
<td>4.1</td>
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<tr>
<td>Gross financing need 6/</td>
<td>2.7</td>
<td>1.3</td>
<td>2.5</td>
<td>3.1</td>
<td>1.9</td>
<td>3.1</td>
<td>4.0</td>
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<tr>
<td>Billions of U.S. dollars</td>
<td>0.5</td>
<td>0.4</td>
<td>1.1</td>
<td>11.1</td>
<td>15.4</td>
<td>11.1</td>
<td>6.7</td>
<td>-0.2</td>
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<tr>
<td>Scenario with key variables at their historical averages 7/</td>
<td>11.1</td>
<td>17.6</td>
<td>17.1</td>
<td>12.1</td>
<td>0.0</td>
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<tr>
<td>Scenario with no policy change (constant primary balance) in 2008–13</td>
<td>11.1</td>
<td>17.6</td>
<td>17.1</td>
<td>12.1</td>
<td>-0.8</td>
<td>-0.8</td>
<td>-0.8</td>
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IV. Options to Improve Incorporation of PPPs risks into DSAs

There may be room for refining DSAs

Growing importance of PPPs need to reflect them better in DSAs

• Option 1: Memo line for PPP liabilities (stock; relevant for pensions)
• Option 2: Measure implicit PPP debt:
  − Expected increases in PPP-related payments to derive needed adjustment
  − Include a line for total PPP implicit debt in NPV terms
• Option 3: Use main risk factors on future payments for stress tests:
  − Construction
  − Financial, including exchange rate risks/guarantees
  − Availability; Demand
  − Political; Residual value; Force majeure.
### IV. Options to Improve Incorporation of PPPs risks into DSAs

Option 3. Estimate impact of risks on debt profile for each scenario

#### Payments for Contingent Liabilities under PPPs: Risks Stress Tests (US$ million)

<table>
<thead>
<tr>
<th>Sector j (ex: Transport)</th>
<th>2010e</th>
<th>Long-Term Projections</th>
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<tbody>
<tr>
<td>Demand Scenario</td>
<td>Actual and baseline projected demand</td>
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</tr>
<tr>
<td></td>
<td>Demand is x% below baseline level</td>
<td></td>
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<tr>
<td>Exchange Rate Scenario</td>
<td>Actual and baseline projected exchange rates</td>
<td></td>
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<tr>
<td></td>
<td>x% xrate depreciation compared to baseline</td>
<td></td>
</tr>
<tr>
<td>Availability Scenario</td>
<td>Actual and baseline projected availability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Availability is x% below baseline level</td>
<td></td>
</tr>
<tr>
<td>Combined Shocks</td>
<td>Baseline projection</td>
<td></td>
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<tr>
<td></td>
<td>All shocks</td>
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</tbody>
</table>
IV. Options to Improve Incorporation of PPPs risks into DSAs

Valuing PPPs-related liabilities:
No information on PPP because no idea on default probability and risk valuation

- **Face value or maximum loss**
- **Expected cost (50% confidence level)**
- **Cash-flow at risk or unexpected cost (95-99% confidence level)**
- **Market value of the guarantee**
  - **Implicit guarantee pricing**
    - Estimate market value as: Value of risk-free bond—Value of nonguaranteed bond issued by recipient of the guarantee
    - Estimate expected cost by using historical default and recovery rates compiled by rating agencies and compare these to actual yield spreads
    - Historical data on loan loss experience could also be used to estimate expected costs if there is a large portfolio of similar contingent liabilities.
  - **Direct guarantee pricing:**
    - Option pricing by exploiting similarities between guarantees and put option. By guaranteeing a firm’s loan, state issues a put option on assets of the firm
    - Simulation models (e.g., Monte Carlo) to estimate the probability distribution of losses from the guarantee
THANK YOU

COMMENTS WELCOME