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## **Disclosing Fiscal Risks in the Post-Crisis World**

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## EXECUTIVE SUMMARY

*This note discusses appropriate methods for disclosing fiscal risks from exogenous shocks and the realization of explicit or implicit contingent obligations of the government.*

*Expanding on previous guidance prepared prior to the crisis, the note focuses on fiscal risks emerging from recent public interventions in the financial sector. Its key recommendation is that countries should regularly prepare and publish a statement of fiscal risks, ideally accompanying annual budget documents, and including the different types of risks related to already-announced public interventions in support of the financial sector.*

### I. INTRODUCTION

Fiscal outturns often differ from budget or other fiscal projections. These differences may result from deviations of economic growth from expectations, unanticipated terms-of-trade shocks, natural disasters, or calls on government guarantees—both explicit and implicit. The impact of such unforeseen events on the public finances is clearly illustrated by the unfolding global financial and economic crisis. The sharp deterioration of the economic environment and financial markets, and the policy response of governments aimed at stabilizing the financial sector and stimulating aggregate demand, have resulted in an increase in both public debt and government contingent liabilities that is unprecedented in scale and pervasiveness since the end of World War II.<sup>2</sup> Moreover, uncertainty about the timing and strength of the recovery in economic growth raises questions about how quickly these increased liabilities can return to more comfortable levels.

To help address the challenges posed by fiscal risks, especially from macroeconomic shocks as well as contingent liabilities and off-balance-sheet activities that are not fully reflected in “headline” fiscal indicators, several countries have increased the disclosure of such risks over the last decade.<sup>3</sup> Recent public sector assistance to troubled financial institutions, and risks stemming from more-uncertain-than-usual economic growth projections, have renewed the importance of proper fiscal risk disclosure.

It will be particularly important to report properly on the numerous public interventions aimed at restoring confidence in the markets and stabilizing financial conditions. These interventions have been carried out rapidly and by a wide range of institutions, with different reporting and oversight mechanisms. They include liquidity injections; the resolution of financial institutions with public support through closure, nationalization, recapitalization, or

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<sup>2</sup> For an analysis of the impact of the crisis on the state of the public finances, see Cottarelli and others (2009a).

<sup>3</sup> See Cebotari and others (2008) for a comprehensive review of the international practice in the area of fiscal risk disclosure and management, as well as suggested good practice guidelines. A fuller discussion of issues and practices related to contingent liabilities, including methods to estimate the expected cost of contingent liabilities, may be found in Cebotari (2008).

mergers; the establishment of funds to purchase troubled securities from financial institutions; and extensions of deposit and other guarantees. Such interventions are likely to have a sizable fiscal impact in the future. In view of their potential costs, thorough and transparent reporting is crucial for a clear understanding of the fiscal stance and of fiscal sustainability. Transparency regarding fiscal risks would also help in designing exit strategies from extensive intervention in the financial sector.

This note discusses how to report meaningfully and transparently on the possible impact of the various forms of risks facing the government. It defines fiscal risks and discusses the rationale and methods for disclosing them; summarizes the main types of risks derived from recent public interventions in support of the financial sector; and provides specific suggestions for the proper reporting on direct and indirect public interventions in bank restructuring operations.

## II. WHAT ARE FISCAL RISKS?

For the purpose of this note, fiscal risks refer to potential differences between actual and expected fiscal outcomes (e.g., fiscal balances and public debt). Such deviations occur often, because budgets are based on assumptions that, in the end, may not materialize, and because several operations may initially be conducted off-budget. These deviations are usually small and manageable. But some shocks can impose a major, unexpected burden on the public finances. For instance, a severe financial crisis can turn overnight a country with relatively low public debt into one with a severe debt overhang. Policymakers need to anticipate that such risks can materialize and align fiscal policy accordingly.<sup>4</sup>

Fiscal risks stem from exogenous shocks and the realization of explicit and/or implicit contingent obligations:

- **Exogenous shocks.** Fiscal deficit targets may be missed due to macroeconomic shocks, such as a slowdown in economic activity, which in turn reduces revenue collections and increases unemployment benefits and other social safety net outlays. The public debt may shoot up if the exchange rate suddenly depreciates (in past crises this has been one of the largest sources of fiscal risks, especially in countries with a relatively high share of foreign currency denominated debt). Similarly, countries with high public debts are vulnerable to interest rate shocks. In low-income countries, aid shortfalls may lead to higher debt. Commodity exporters could suffer from sharp declines in commodity prices (through their impact on revenue). And natural disasters may lead to major repair or compensation costs—up to 10 percent of GDP in smaller economies (Freeman and others, 2003).

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<sup>4</sup> Fiscal risks discussed in this note refer to events that can materialize over the next few years. Longer-term spending pressures, e.g., those associated with aging, can be predicted in advance and are not discussed as risks, even though their disclosure is also important.

- **Explicit contingent obligations.** Contracts (including public-private partnerships) often have explicit government guarantee clauses (e.g., to secure loan repayments, minimum volumes and/or prices), and calls on these guarantees trigger automatic obligations for the budget.
- **Implicit contingent obligations.** Governments may step in for moral or political considerations. For example, a systemic risk of failure in the banking sector often leads governments to intervene to protect depositors beyond the levels envisaged in deposit insurance guarantee schemes, and to preserve, at least to some extent, credit flows.<sup>5</sup> Governments have also rescued subnational levels of government to prevent them from defaulting and to protect sovereign credit ratings, or have taken over near-insolvent state-owned enterprises to preserve the provision of strategic goods and services.

### III. WHY AND HOW SHOULD FISCAL RISKS BE DISCLOSED?

Disclosing fiscal risks and enhancing transparency more generally invite additional scrutiny of fiscal activities and their implications. In turn, improved quality of information on fiscal risks builds support for prudent fiscal policies, leads to better risk mitigation, and promotes better policy responses. Policies can be adjusted more quickly when risks increase, and better strategies can be established for how fiscal policy should react to shocks (e.g., offsetting measures can be identified in advance should revenues fall short of projections and policymakers decide to maintain the original fiscal balance target). Procedures can be put in place to limit risks (e.g., parliament can set and approve yearly ceilings on the guarantees to be issued). And policymakers can weigh increased exposure to risks (e.g., new guarantees) against other expenditure proposals, thereby improving prioritization of budget decisions.

Disclosure also pays off by strengthening confidence in the public sector accounts, thereby reducing borrowing costs and improving market access. Indeed, empirical evidence suggests a link between greater fiscal risk disclosure and better sovereign credit ratings (Chart 1): fiscal transparency indicators are found to be positively correlated with sovereign ratings after controlling for per capita income, inflation, default history, and political stability.<sup>6</sup> Moving from no disclosure to some disclosure of fiscal risks is associated with an improvement in a country's credit rating by one full notch (e.g., from Baa1 to A3 on Moody's scale).

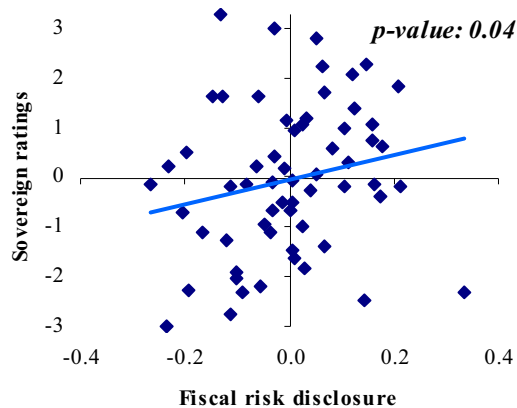
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<sup>5</sup> The large costs of government interventions during systemically important banking crises that took place from 1970 to 2007 are documented by Laeven and Valencia (2008). Initial estimates of the fiscal implications of interventions in the context of the unfolding global financial crisis are in Cottarelli and others (2009a).

<sup>6</sup> See also Glennerster and Shin (2008) and Hameed (2005).

## Chart 1. Fiscal Risk Disclosure and Sovereign Credit Ratings

*(Scatter plot of orthogonal components)*



Source: Cebotari and others (2008, Box 2).

Note: The sample consists of 56 countries, surveyed at different points during 1999–2007. The scatter plot reports the orthogonal components of sovereign bond ratings and fiscal risk disclosure to per capita income, GDP growth, inflation, fiscal balance, current account balance, external debt, default history, and political stability.

A useful venue for disclosing fiscal risks is a “statement of fiscal risks.” Currently, seven countries (Australia, Brazil, Chile, Colombia, Indonesia, New Zealand, and Pakistan) consolidate information on fiscal risks in a single published document. This helps to identify possible gaps and to ensure full coverage of risks. Such a “statement” is usually submitted to parliament alongside other budget documents—as mandated, in some cases, by fiscal responsibility laws.

A fiscal risk statement usually includes a discussion of past experiences with the materialization of risks; a presentation of policies to mitigate and manage risks; and forward-looking risk estimates (Box 1). Its format should reflect the key risks facing a particular country, and its evolving circumstances.

Although it is generally desirable for disclosure to be as comprehensive as possible, in a few specific instances disclosure could generate moral hazard: reporting on certain implicit contingent liabilities might lead to the perception that the government will step in to cover losses, thus leading to undue risk taking. Similarly, information that can harm the government’s position in litigation or ongoing negotiations should not be disclosed. That said, fiscal policy should take into consideration all fiscal risks, including those that are not disclosed or explicitly quantified.<sup>7</sup>

<sup>7</sup> The timing of disclosure may matter for converting implicit into explicit guarantees. For example, when there are clear expectations that the government would bail out depositors despite the absence of an explicit deposit guarantee scheme, the government could establish an appropriately funded explicit (and limited) guarantee but do so at a time when market conditions are benign.

### Box 1. Statement of Fiscal Risks

A statement of fiscal risks can be structured by grouping similar risks: macroeconomic risks (e.g., from growth, terms-of-trade, and exchange and interest rates); contingent obligations (e.g., government guarantees); risks due to the operations of public-private partnerships (PPPs) and state-owned enterprises (SOEs); central government backing of subnational levels of government; risks related to natural disasters; and fluctuations in the value of public sector assets. To avoid moral hazard, implicit risks—including those from the banking system and ongoing litigation against the state—in principle should not be disclosed. However, actions already announced or undertaken should be fully disclosed and discussed.

For each type of relevant risk, the statement could discuss past realization and forward-looking risk estimates. The discussion and quantification of past risks provides background to policies aimed to reduce such risks in the future. For instance, systemic revenue overestimation points to the need for more detailed analysis of the underlying assumptions and method for estimating revenue, including the economic growth assumption. Similarly, frequent bailouts of PPPs, SOEs, and subnational levels of government may call for strengthening the monitoring and central control of their activities.

Forward-looking risk estimates can draw on existing country practices for disclosing risks, i.e., (i) sensitivity analysis to key macroeconomic variables, alternative macroeconomic scenarios, stress tests for fiscal aggregates, or fan charts that illustrate the probability distribution for outcomes; (ii) debt sustainability analyses; (iii) description and quantification of budget exposure to government guarantees through option pricing models, stochastic simulation, or risk ratings approaches; (iv) description of government guarantees in PPP projects, alongside the projects' face value, expected cash flow payments by the government and their net present value; and (v) the nature and scope of ongoing litigation against the state.

In addition, full-fledged general government or public sector accounts and timely audited SOE accounts provide a good source of information for a statement of fiscal risks.

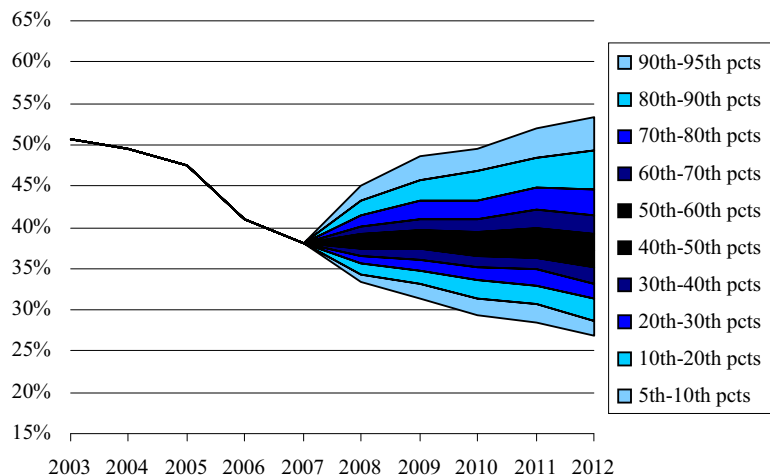
Fan charts offer a visually attractive way to disclose projections while recognizing the uncertainty around them. These charts display the probability distribution of possible future paths for a fiscal variable of interest. An example, prepared in early 2008, is included for Thailand's public debt-to-GDP ratio (Chart 2).<sup>8</sup> The evolution of debt was forecast for 2008 and beyond using the identity equation that relates debt in year  $t$  to debt in the previous year, the primary balance in year  $t$ , and other stock-flow adjustments in year  $t$ . Four other variables enter the identity equation: real GDP growth, the real interest rate on domestic and foreign currency debt, and the rate of change of the real effective exchange rate. To estimate the distribution (assumed joint normal) of the shocks to these four variables, their mean, standard deviation, and correlations are computed. From this distribution, random shocks are drawn and added to the mean of these variables. Debt-to-GDP ratios are then calculated recursively, and ranked from highest to lowest. The calculations for Thailand, undertaken before the

<sup>8</sup> See also Celasun, Debrun, and Ostry (2006). A recent example for Eastern Caribbean Currency Union member countries may be found in Cashin and others (2009, Chapter V).



onset of the global financial crisis, indicated that there was a 20 percent probability that, by 2012, public debt would remain in the 35–40 percent of GDP range and a 90 percent chance it would remain in the 25–55 percent range. The global financial crisis turned out to be severe: as a result, the debt reached 45 percent of GDP in 2008 and is now projected at 48½ percent at end-2009 (slightly outside the initial 90 percent confidence interval for 2009).

**Chart 2. Thailand: Public Debt (percent of GDP)**



#### IV. FISCAL RISKS STEMMING FROM PUBLIC INTERVENTIONS IN SUPPORT OF THE FINANCIAL SYSTEM<sup>9</sup>

The magnitude and speed of recent public interventions in troubled financial institutions has placed the issue of fiscal risk disclosure at the forefront of the reform agenda. Such interventions have sought to restore confidence in the markets and to stabilize financial conditions. They can be classified in five categories, each bearing specific risks:

- **Government guarantees.** These include blanket deposit guarantees, and guarantees on interbank transactions, some categories of new debt, and borrowing by specific firms and/or sectors (e.g., small and medium-sized enterprises, automakers, housing, and student loans). While several governments charge fees for these guarantees, in most instances the subsidy element is substantial. Indeed, as a result of these guarantees, governments' balance sheets are exposed to large losses should the financial sector's situation deteriorate further.
- **Liquidity provision by central banks.** This provision has been expanded by lengthening the duration of the existing liquidity instruments and, in some cases, broadening the set of assets eligible as collateral to include commercial paper, mortgage-backed securities, and student loans. Although these operations may not

<sup>9</sup> In addition to the guidance provide in this section, the IMF and the International Public Sector Accounting Standards Board have set up a joint task force to review the accounting and valuation policies being applied by governments when reporting the financial implications of crisis-related public interventions, including the exposure to contingent liabilities and other fiscal risks. This task force will also examine the manner in which actions undertaken by central banks and through special purpose entities are being reported.

affect the net worth of the central bank, they alter the size and structure of its balance sheet in terms of liquidity, maturities, currencies, and asset price volatility, thereby exposing the central bank (and eventually the government) to significant risks.

- **Lending operations.** The beneficiaries of these operations include not only banks, but also other financial institutions and nonfinancial companies, such as automakers. While these lending operations do not affect the government's net worth as long as the value of the loan remains unimpaired, they increase the government's lending portfolio and expose the government to counterparty/default risks and, if they create duration and currency composition mismatches, to interest and exchange rate risk.
- **Capital injections.** These have taken a number of forms, including purchases of preferred or ordinary shares, hybrid bonds, convertible notes, and subordinated debt. The immediate risk to the public sector's net worth stems from the uncertainty surrounding the value of the government's residual claim on the institution at the time of the capital injection, which may be smaller than what was paid by the government. Fiscal risks also stem from future changes in the value of residual claims.
- **Asset purchases.** These include the purchase of loan portfolios, insured mortgages, commercial paper, corporate bonds, troubled assets, and/or stocks. They expose the public sector to valuation risks and, if they create mismatches in duration and currency composition of the public sector's assets and liabilities, to interest and exchange rate risk. These risks are compounded by the difficulty of valuing some of the assets, notably those whose markets are currently illiquid.

Some recurrent features emerge: (i) these operations, which bear significant fiscal risks, have been conducted by governments but also by other public institutions, such as central banks and public financial and nonfinancial institutions. Accordingly, many off-balance-sheet operations are not directly reflected on the government accounts but, sooner or later, may end up on the government's books; (ii) the design of support operations has often been such as not to affect their "headline" fiscal deficits, either by extending guarantees or maintaining residual claims on financial institutions; (iii) although some governments may ultimately be able to recover in full the original value of some of the assets taken onto the public sector's balance sheet, estimating the current value of such assets is often very difficult; and (iv) although the terms of individual operations have often been reported transparently, the ensuing risks have rarely been reported in a systematic and integrated way. As a result, the public is still confused about the overall fiscal implications of all these operations taken as a whole.

As a starting point, the Government Finance Statistics Manual 2001 (GFSM 2001) provides an integrated framework for reporting direct government restructuring operations, focusing

on the public sector's net worth and reconciling stocks and flows as well as cash transactions (Box 2). When applying this framework, particular attention should be given to the following issues:

- **The coverage of the sovereign balance sheet should be as broad as possible**, including all activities with implications for the public finances that are conducted by the government, central bank, or other public sector entities. This approach helps reveal the size and nature of the public intervention and its impact on fiscal solvency; moreover, it facilitates an analysis of policy coordination and of the institutional efficiency aspects of the various components of the public sector.
- **Particular attention should be attached to the estimation of the fair value of assets and liabilities.** In the absence of a market price for purchased assets (or taken on liabilities), this estimation will have to rely on other information. An assessment of the fair value of the transaction could be made on the basis of the discounted value of expected future flows, value of the counterpart of the transaction (such as mortgaged property values), or the price at which similar assets trade.

### **Box 2. An Example of Reporting Government Intervention under GFSM 2001\***

To illustrate how government interventions are reported under GFSM 2001, consider the purchase by the government, at a price of \$150 million, of troubled assets with an estimated fair value of \$100 million. This transaction will be reflected on the:

- **Statement of government operations (accrual flows).** The transfer will be reported as an expense (subsidy), contributing to a decline in the net lending/borrowing balance (i.e., an increase in the fiscal deficit) of \$50 million; the purchase of assets will be reported at fair value (\$100 million), as financing (purchase of financial assets); and the funding of the operation (\$150 million) will be reported either as a decline in bank deposits or the issuance of government bonds.
- **Statement of sources and uses of cash (cash flows).** The transfer will be reported as a cash payment for operating activities, contributing to a decline in the cash balance of \$50 million. The purchase of assets will result in a negative cash flow from financing activities of \$100 million. If the operation is financed through the issuance of bonds, this issuance will result in a positive cash flow from financing activities of \$150 million and there will not be any change in the stock of cash. If financed from a withdrawal of bank deposits, this withdrawal will not be reported and the stock of cash will decline by \$150 billion.
- **Government's balance sheet (stocks).** The purchased assets will add to the government financial assets (by \$100 million). The financing of the operation will result in a decline in government's deposits (assets) or an increase in its debt (liability). The deficit will result in a decline in the government's net worth.

Subsequent changes in the value of the assets will be reported as holding gains/losses in the statement of other economic flows and will affect the government's net worth as reported on its balance sheet.

\* A detailed discussion on how to report the impact of government interventions in support of the financial system is included in Cottarelli and others (2009b).

This framework—which reports direct costs—should be supplemented, however, by an assessment of the fiscal risks associated with the different types of interventions:

- **An assessment of fiscal risks could be based on an analysis of alternative scenarios.** Beyond an analysis of the implications of changes in macroeconomic variables, as in commonly used debt-sustainability analyses, alternative scenarios could explore the implications of different assumptions with regard to prices and recovery rates of the financial assets on the government’s balance sheet. Box 3 illustrates a possible format for a chart presenting scenarios involving different outcomes for the debt/GDP ratio under various assumptions for recovery rates.
- **Fiscal risks associated with financial sector restructuring costs should be incorporated in fiscal analysis and the budget process.** When preparing the budget, some allowance needs to be made for the possibility that some risks and contingent liabilities will materialize. The government should have in place a strategy regarding how fiscal policy would respond to unexpected declines in the value of financial assets held by the government (or to an increase in the likelihood that contingent liabilities will materialize). In this connection, it can include contingency appropriations in the budget, whose magnitude would reflect the likelihood of fiscal risks materializing.<sup>10</sup> Medium-term fiscal frameworks and debt sustainability analysis should assume different scenarios regarding the materialization of contingent liabilities, recovery rates of debt repayments by recapitalized agencies, and resources generated from the sale of acquired assets and equity stakes.

Detailed information about fiscal risks stemming from government interventions should not only be disclosed when these risks are first incurred, but should also be updated on a regular basis and published in a single “statement of fiscal risks.” The type of information reported could include the main characteristics of the interventions, their impact on the public sector’s balance sheet, and estimates of their associated fiscal risks.

## V. CONCLUDING REMARKS

Conducting fiscal policy in an uncertain context is a challenge for policymakers. Information on fiscal risks and its public reporting leads to a better understanding of the true state of the public finances. Thus, it helps policymakers design, and muster public support for, appropriate responses to the realization of various contingencies. Indeed, ignoring fiscal risks would weaken the ability to respond to shocks, and would be damaging to the sustainability of public finances.

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<sup>10</sup> Accrual accounting standards require guarantees to be recognized (i.e., to include the net present value of the amount expected to be called as a liability on the balance sheet and an expense in the operating statement), when the probability that a contingency will occur is likely (usually meaning 50 percent or greater) *and* the expected called amount can be reasonably measured. Amendments to these standards have been proposed, requiring guarantees to be recognized when their probability of occurrence is lower than 50 percent.

More specifically, in the context of the unfolding global financial crisis, a wide range of public sector interventions have been in support of the financial system. While these interventions have been necessary, they have generated further fiscal risks. Comprehensive reporting would help governments to define a management strategy of the assets and liabilities that they have taken on their balance sheet and to prepare exit strategies for reducing their presence in the financial sector and eventually withdrawing support.

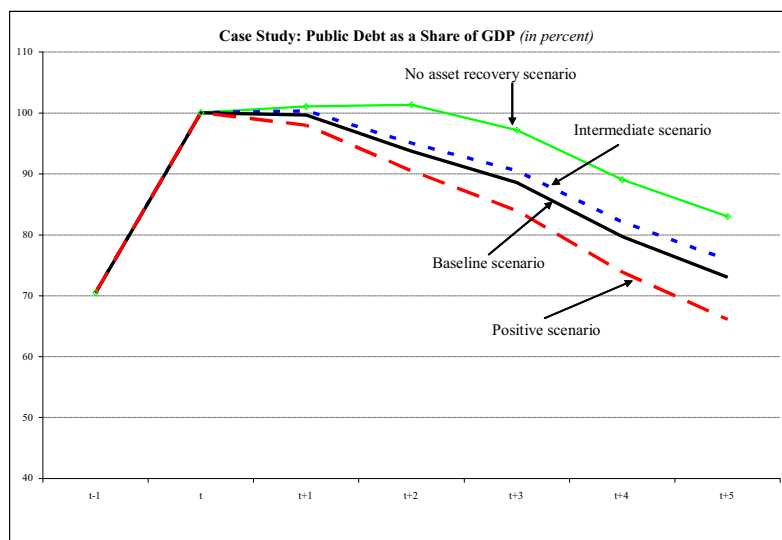
This note has proposed a set of principles to disclose fiscal risks properly and, expanding on previous guidance prepared prior to the crisis, has focused on fiscal risks emerging from recent public interventions in the financial sector. Our key recommendation is that countries should regularly prepare and publish a statement of fiscal risks, ideally accompanying budget documents and including risks stemming from public interventions in support of the financial sector.

### Box 3. Using Scenarios to Illustrate the Impact of Different Asset Recovery Rates

Consider a country that experiences a financial crisis in year  $t$ , with the government's interventions in support of the financial system leading to a large increase in direct liabilities, and the value of earlier outstanding debt and explicit guarantees (contingent liabilities) also increasing sharply due to valuation effects (e.g., because of an exchange rate depreciation). In this example, the debt-to-GDP ratio rises to 100 percent in year  $t$ . As a result, the government undertakes fiscal consolidation over the subsequent years.

At the same time, the government's claims also increase. In this example, the government takes ownership stakes in, and obtains claims on, some financial sector institutions, opening the way for future privatization gains and asset recovery.

Given the uncertainty over the future realization of assets, it is useful to compare different scenarios for the path of gross public debt (see figure). Different scenarios can be run assuming different asset recovery rates, returns from privatization, and realization of contingent liabilities. All should be compared to a baseline scenario. In this example, the debt stock could vary between 65 percent of GDP and 85 percent of GDP at the end of a five-year period.



- The baseline scenario assumes no immediate privatization, and a partial realization of other claims. Public debt falls as a share of GDP, reflecting fiscal effort and asset recovery.
- Under a “no asset recovery” scenario, public-debt-to-GDP ratio declines solely as a result of fiscal consolidation. This scenario also includes the realization of a small contingent liability in 2011.
- An intermediate scenario assumes that recovery of assets is only half of that under the baseline scenario.
- A “positive” scenario assumes that in addition to the baseline recovery rates, the banks are gradually, but fully, privatized over the five-year period.

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