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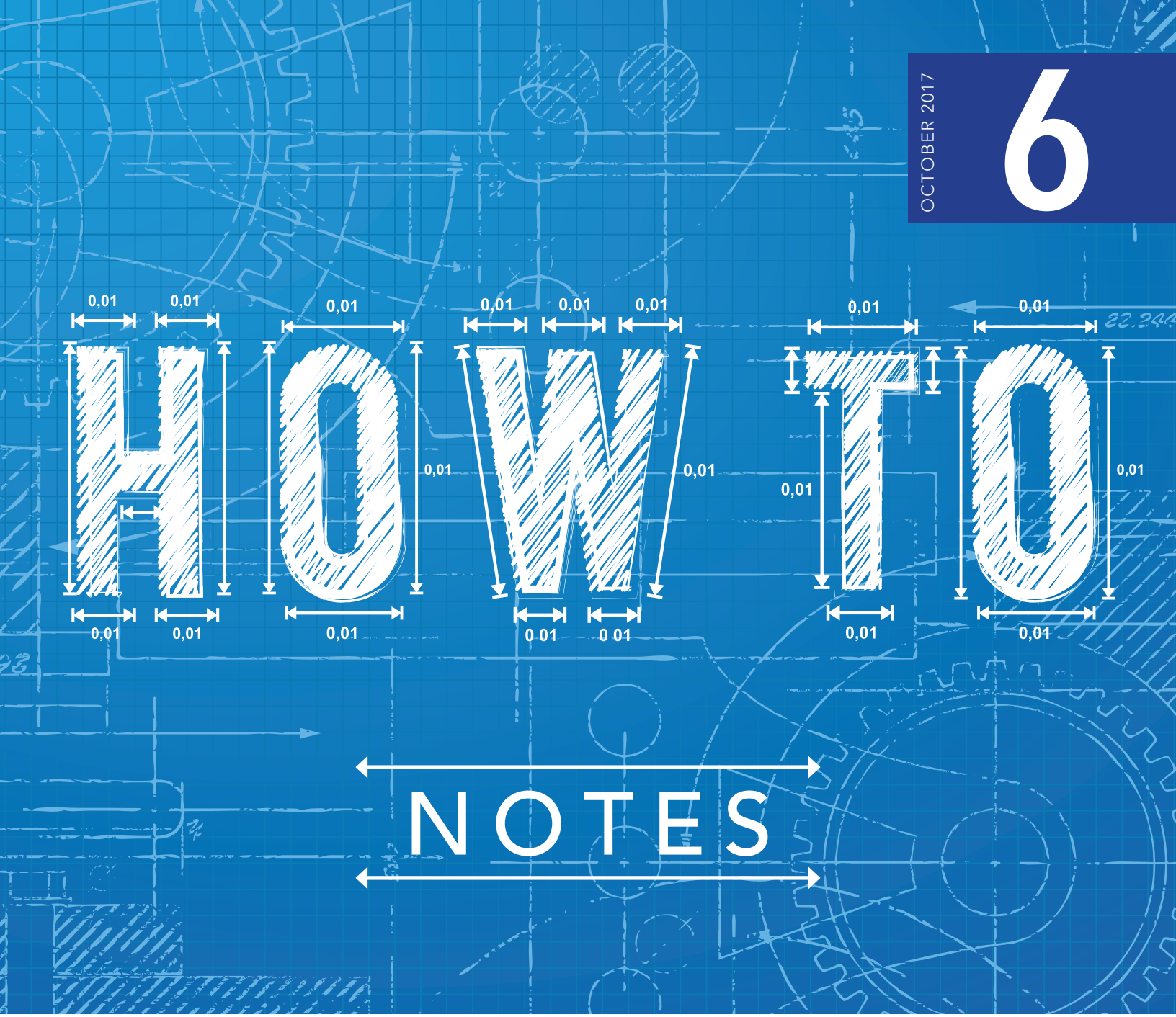

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HOW TO STRENGTHEN THE MANAGEMENT OF GOVERNMENT GUARANTEES

Guarantees are contingent liabilities that can expose the issuing government to significant fiscal risks.[1] Unless issued prudently and managed effectively, when called, guarantees can cause substantial burden on the budget, resulting in large unanticipated cash outflows and increased debt. According to a 2016 Fiscal Affairs Department (FAD) study, the global average fiscal cost of realized contingent liabilities between 1990 and 2014 was about 6 percent of GDP, with the maximum as high as 57 percent of GDP (IMF 2016b). Despite the risks involved with guarantees, their management often remains weak. While many countries use limits to restrict exposure, few systematically use mitigating measures and make upfront budget provisions for meeting future obligations from guarantees.

The purpose of this note is to highlight commonly observed weaknesses in the management of government guarantees,[2] describe good practices, and discuss measures governments could take to strengthen (1) the evaluation of guarantee proposals; (2) the quantification of risks arising from guarantees and the mitigation of these risks; and (3) the budgeting, accounting, monitoring, and disclosure of guarantees. The note focuses on explicit government guarantees—it does not address issues specifically related to implicit guarantees, which would be beyond its purview. Although the discussion focuses primarily on credit guarantees that typically constitute most of a government's guarantee portfolio, the principles outlined here can extend to other explicit guarantees.[3] Country examples have been used to highlight desirable elements within a sound system of guarantee management.

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[1]Contingent liabilities are potential obligations that do not arise until a particular discrete event (or events) occurs in the future.

[2]The terms "guarantee" and "government guarantee" are used interchangeably in this document.

[3]A forthcoming FAD How-To Note discusses public-private-partnerships (PPP)-related guarantees in more detail.

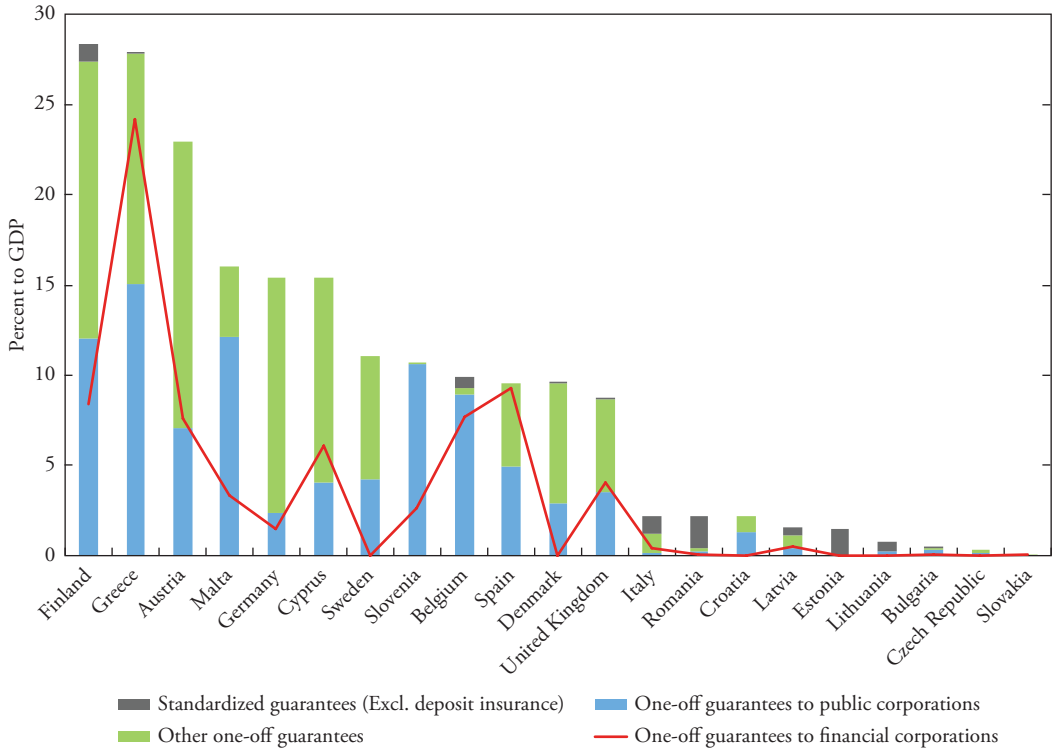
Introduction

Government guarantees are legally binding undertakings given by a government to assume responsibility for servicing a debt or the performance of an obligation, on behalf of another entity under certain specified conditions—typically a default by that entity. Guarantees are usually extended to public entities—subnational governments and public financial and nonfinancial corporations—with the objective of providing them access to cheaper credit or to improve viability of projects with significant social and economic benefits. Governments may also provide guarantees to fulfil preconditions for concessional loans from bilateral/multilateral agencies to subsovereign borrowers. Many governments provide guarantees to private entities, including individuals.

Guarantees can also be implicit, arising from expectations that governments are "morally obliged" to provide financial support in the event of a crisis or disaster. Implicit guarantees do not arise from a contractual arrangement and are not legally enforceable, but they are known to create substantial fiscal risks. Subnational governments and state-owned financial and nonfinancial corporations usually enjoy such guarantees. Such expectations might arise from a government's policies and actions concerning these entities. For example, a tighter regulation of subnational borrowing might create a perception of an implicit government guarantee.

Guarantees do not involve any upfront cash outflow from the budget at the time of issuance but they expose the government to the risk of future cash outflows. The timing and quantum of such cash flows are often difficult to estimate. Size and composition of the accumulated stock of guarantees vary considerably from country to country (Figure 1). Organization for Economic Cooperation and Development (OECD) 2017a finds an increase in the use of government guarantees, and other types of contingent liabilities, since the global financial crisis.

Figure 1. Stock of Government Guarantees in European Countries (2015)



Source: Eurostat
Note: Represents stock of general government guarantees at nominal value; excludes debt assumed by the government.

Countries with substantial accumulation of guarantees face the risk of a fiscal shock, as governments may lack adequate budgetary provisions to service obligations arising from invoked guarantees. These risks are exacerbated during times of crisis because of their correlated nature (IMF 2016a). Notwithstanding risks, guarantees have played an important role in governments' attempts to achieve financial stability during crises. Governments have used blanket guarantees to manage the risk of widespread banking sector failure by restoring creditor confidence and to achieve smooth financial intermediation.

The use of guarantees is not always economically efficient, and guarantees may not always be the most cost-effective instrument for public support. Guarantees are often used to subsidize, in a nontransparent manner, beneficiaries and projects that governments favor. Because guarantees do not involve upfront cash outflow, governments may be tempted to use them to circumvent budgetary constraints, and prefer them over direct expenditure. They may be perceived as "free of cost." There is seldom a systematic assessment of risks involved and an upfront recognition of potential loss that guarantees may cause. Being off-budget, guarantees escape the usual scrutiny, including legislative scrutiny, that applies to conventional expenditure decisions. As a result, they may be used to support low impact or less deserving projects.

Many governments do not maintain a complete and verifiable record of guarantees. Few governments produce a comprehensive report covering the different types of guarantees and providing a consolidated view of risk exposure. There is little monitoring of guarantees, and the risks arising from them are seldom actively managed. Often there is ambiguity about who in the government is authorized to issue guarantees and who is accountable for their results. The institutional arrangements for the management of guarantees, including roles and responsibilities of different government entities, are often not well defined.

To manage guarantees effectively, governments need to have a complete understanding of their portfolio of guarantees and associated risks; develop tools and techniques for evaluating guarantee proposals; consider appropriate risk mitigation measures; and adopt suitable budgeting, accounting, and disclosure

Box 1 Steps to Strengthen the Management of Guarantees

1. **Ascertain the size of the guarantee exposure** – Conduct an inventory of guarantees to be updated routinely.
2. **Ensure that guarantees are properly recorded and disclosed** – Regardless of the accounting base, at a minimum for each class of guarantees, record and disclose in the annual budget documents or in a separate fiscal risk statement the maximum amount guaranteed, in nominal terms, and the possible reimbursement, recovery, or counterclaim by the government.
3. **Ensure adequate budget provisions to meet claims** – At a minimum, the budget should include a guarantee (or contingency) reserve. The size of the reserve should be estimated with consideration to likely payments from the call of guarantees. Payments that are more or less certain should be distinctly provided for, rather than being paid for from the reserve.
4. **If guarantees are sizable, create a guarantee reserve fund** – The need for a reserve fund should be judged on a consideration of country-specific circumstances. Funds can be built by setting aside resources when issuing guarantees and by crediting guarantee fees. Notional funds are preferred for ease of management.
5. **Regulate the issuance of new guarantees through a policy framework** – The framework should specify a ceiling and provide guidance on when guarantees can be considered, what fees will be charged, and which risk containment measures will be used.
6. **Develop capacity to evaluate guarantee proposals and assess associated risks.**
7. **Develop measures to mitigate risks** – Examples include risk-based fees, partial guarantees, deductibles, reinsurance, and reserves.

practices. Box 1 provides a step-by-step approach to strengthening guarantee management. Recognizing that issuance of guarantees is often a political choice, the emphasis is on developing technical capacity and processes to support informed decision making. The rest of this note elaborates on these steps and discusses the available options.

Types of Guarantees

Building a comprehensive inventory of guarantees is the first step in developing a complete understanding of guarantees and associated risk exposure. For this purpose, where possible, guarantees can be registered at their nominal values, which will reflect the maximum exposure of the government. Guarantees can take several forms, and the information on them is often scattered in several official documents, which might need to be collated. The most common forms of guarantees are:[4]

- **One-off guarantees**
  - **Loan (and other debt instrument) guarantees** are commitments by a government to bear the risk of nonpayment (default risk) by a borrower, where the government undertakes to assume the debt service obligations (entirely or in part) of the borrower in case the borrower defaults. Loan guarantees are the most common form of guarantees and typically one of the largest components of a government's guarantee portfolio.
  - **Exchange rate guarantees** are promises by a government to compensate a borrower—typically a public corporation or financial institution—for losses on their foreign currency borrowings due to exchange rate fluctuations.
  - **Guarantees related to public-private partnership (PPP) contracts** are issued to the private partner(s) as part of a risk-sharing arrangement (for example, minimum revenue guarantees, exchange rate guarantees, transfer price guarantees) with the aim of improving the viability and sustainability of a project.
  - **Other one-off guarantees**—such as lines of credit and loan commitments, contingent credit availability, letters of credit, and so forth—differ from loan guarantees in the sense that they do not cover an existing debt but become effective upon actual withdrawal of funds.
- **Standardized guarantees** are issued to a large number of beneficiaries, usually for fairly small

[4]See *Government Finance Statistics Manual 2014* (IMF 2014) for a classification of guarantees.

amounts, with standard terms and conditions. These are characterized by similar repeated transactions and pooling of risks. Standardized guarantees usually include:
  - **Umbrella guarantees** to financial institutions for specific types of loans—for example, mortgage loans, student loans, small and medium-enterprise loans, agriculture loans, and export credits.
  - **Government insurance schemes**—for example, deposit insurance, crop insurance, and natural disaster insurance, where the government guarantees the recovery, in full or part, of loss incurred by the beneficiaries under certain prespecified circumstances.
- **Pension guarantees** where the government guarantees a minimum (annual) return on a defined-contribution pension plan to cover for the investment risk, or where the government guarantees a minimum pension irrespective of the fund balance in a participant's account.

Guarantees may also be issued by public corporations and subnational governments that may carry an explicit or implicit counterguarantee of the national government, exposing the latter to the same risks. Standardized and pension guarantees are often provided and managed by specialized institutions outside the core government. In such cases, the government is often not involved in decisions on individual transactions. Those institutions work within their own risk management frameworks.

Evaluating a Guarantee Proposal

Guarantees can be useful and efficient when appropriately targeted and managed. The use of guarantees may be justifiable on the grounds of the need to correct market failure (for example, in relation to infrastructure development), to achieve income redistribution (for example, to protect certain industries or firms), and to promote international competitiveness (for example, through export credit) or access to international markets (IMF 2008). They can, however, be distortionary when market failure is absent, and the economic justification is weak. In such cases, a guarantee would create an implicit subsidy equivalent to its value.

In general, guarantees are more efficient when the intended benefits are provided to multiple beneficiaries (OECD 2005). Extending subsidies or direct loans to every beneficiary would be more expensive than providing guarantees, as not all guarantees will likely be called. Moreover, transaction costs of distributing subsidies or loans to multiple beneficiaries may also be higher. When extended to a single beneficiary, guarantees are more likely to involve higher costs, and their costs should be compared with the cost of direct support through budget or on-lending.[5] Further, the heterogeneous nature of guarantees has a bearing on the kind and quantum of risk entailed. For example, in the case of debt guarantees, the exposure is limited to the maximum amount guaranteed, but an exchange rate guarantee theoretically exposes the issuing government to unlimited risk.

Countries should aim to develop a policy framework that clarifies the government's position on guarantees and identifies purposes for which guarantees can be considered (Box 2). There are no firm rules or principles to decide when guarantees should or should not be extended. Use of guarantees to meet policy priorities is a political choice, and political priorities change over time. Each guarantee proposal, therefore, needs to be evaluated on its own merit. Decisions on guarantees need to consider two important issues: (1) whether policy objectives that the guarantee is seeking to serve can be achieved without it and (2) whether a guarantee is the most cost-effective public support instrument.[6]

As a rule of thumb, guarantees can be considered for projects undertaken by public or private entities outside the general government where (1) the economic benefits from the project exceed its cost, (2) the project is expected to generate positive returns, (3) the beneficiary is creditworthy, and (4) the project cannot be financed without a government guarantee. Projects designed to serve social objectives that are not likely to generate positive returns or those undertaken by general government entities will be more efficiently served by direct support in the form of subsidy or on-lending.

[5]The cost of a guarantee is typically assessed in terms of "expected payment"—that is, the probability weighted payment, expressed in present value terms, referring to the most likely payment that a government would be expected to make by extending a guarantee. Alternative measures include (1) maximum exposure—the maximum possible loss that a government can suffer by giving a guarantee; (2) exposure at default (EAD)—the likely exposure at the time of default; (3) loss-given-default—EAD adjusted for any possible recoveries, usually expressed as percentage of EAD; and (4) value at risk—the maximum loss a government can suffer at a given confidence interval within a stipulated time.

[6]See Irwin 2003 for a detailed discussion on the identification of appropriate fiscal support instruments.

Box 2 The Netherlands' Policy Framework for Contingent Liabilities

The government of the Netherlands adopted a new policy framework in 2015 for better regulating and managing contingent liabilities. The main features of this framework include the following:

- The government would not take on new contingent liabilities unless there is an overriding reason to do so—for example, in cases where the market does not provide certain services or does so only very inefficiently. This is referred to as a policy of "no, unless."
- A ceiling that sets a maximum limit for the overall level of contingent liabilities contains the government's risk exposure.
- As a rule, all new programs carrying government guarantee and modifications of existing such programs are required to have a sunset clause. The standard end date is five years.
- New policy measures carrying a government guarantee, or changes to an existing measure, require ex ante review by the council of ministers. The result of the review is invariably submitted to parliament.
- Independent expert opinion is obtained on large and complex risks, including fees to be charged.
- To improve transparency, departmental budgets are required to contain a separate section describing guarantees, loans, and financial interventions.
- The government aims to improve the reporting of contingent liabilities both in the budget and in annual reports.

Source: OECD 2014.

Decisions on new guarantees or the extension or expansion of existing guarantees should be made within the ambit of this policy and based on a clear analysis and assessment of the rationale for a guarantee; the associated risks, costs, and benefits; and its affordability (Box 3). Such an analysis would consider the following:

- What objectives is the guarantee seeking to serve, and are they consistent with the government's stated policy on guarantees? Why is a guarantee necessary to achieve this objective(s)? Could the same benefits be provided more efficiently using a conventional expenditure instrument?
- What is the term of the guarantee, and why is this term necessary?
- What are the risks associated with the guarantee? Is there adequate justification for the government to assume those risks? What risk mitigation measures will be used, and how will the residual risks be managed?
- What is the financial position and creditworthiness of the guarantee seeker? Does it have the potential to generate sufficient resources to service its obligations?
- What will the fiscal costs of the guarantee be? What will be the most likely and maximum exposure to the government?
- What impact would the proposed guarantees have on the government's debt level? Would it be consistent with the medium-term debt strategy (MTDS) and any debt limits or rules?

Assessing and Quantifying Risks

Risks associated with a guarantee can be assessed using the standard credit-risk evaluation techniques that focus on estimating the default probability and likely loss in the event of a default (loss given default). There are three principal approaches (The World Bank 2016):[7]

- **Credit rating** – Countries such as Australia, Colombia (Box 4), Indonesia, and Sweden use credit rating of beneficiaries to assess the risks involved in extending guarantees. Credit rating–based risk assessment offers the benefits of a standardized approach that allows access to third-party resources (for example, credit rating agencies) and is generally cost-efficient. Assigning credit ratings internally within the government, however, requires higher technical capacity and understanding of industry-specific risk drivers.
- **Statistical models** – An alternative approach based on statistical techniques involves computing a finan-

[7]See Irwin 2007 for a detailed discussion of valuation techniques.

Box 3 United Kingdom's Checklist for Evaluating Proposals for Contracting Contingent Liabilities

With the objective of ensuring that contingent liabilities are contracted by government departments and agencies with adequate regard to the sustainability of public finances, the U.K. Treasury introduced a new process for approving, monitoring, and managing contingent liabilities. The process requires the departments initiating a high-value contingent liability (a maximum exposure of £3 million or more) to complete a standard checklist to facilitate the treasury's evaluation of the proposal. The checklist contains 19 questions grouped around the following five aspects:

- **Rationale** – What is the problem that needs to be solved, and why is government intervention necessary (that is, what is the market failure)? Where it is not possible to link the intervention to a market failure, a clear explanation is required as to why the government needs to intervene despite the lack of a market failure. Why is incurring or modifying a contingent liability necessary to address the market failure? Why is it better than increasing spending? What other alternatives—for example, subsidies—have been explored?
- **Exposure** – What is the maximum size of the contingent liability? Why is this size necessary? What is the maturity of the contingent liability? Why is this maturity necessary? If, prior to maturity, the contingent liability no longer provides value for money, is there an exit strategy?
- **Risk and return** – What are the triggers for potential crystallization of the contingent liability? What is the expected loss associated with the contingent liability? What is the distribution of possible losses over the life of the contingent liability? How do the risks compare to the returns on the contingent liability?
- **Risk management and mitigation** – Who will manage the risks associated with the contingent liability, and what is the governance process around the management of these risks? What risk mitigation tools have been explored? Is the exchequer being adequately compensated for bearing the risk associated with the contingent liability? How should the exchequer guard against the residual risk?
- **Affordability** – If the contingent liability crystallized, to what extent would it be possible to meet the required payment out of the department's existing budget? What is the ratio of the contingent liability's expected loss to the department's available resources? If the contingent liability crystallized, how would it affect public sector net borrowing and public sector net debt?

Source: Government of the United Kingdom 2017.

cial distress index from a set of weighted profitability and balance sheet ratios (Turkey, Box 4). Weights are obtained through a discriminant analysis and can be adapted to the nature of the entity being evaluated. This approach is easier to use but requires the availability of ample historical data for calibrating the model.[8] A limitation is that its predictability is good only over a very short horizon (one to two years).

- **Scenario analysis** – Few countries (Chile, Colombia, Sweden) use stochastic simulations, typically for assessing risks associated with PPP-related guarantees. The approach involves modeling movements in a risky variable (for example, revenues, traffic flows, exchange rate) based on a set of specified assumptions. The assumptions consider historical data, if available, and the expected behavior of the variable. These techniques offer the advantage of capturing project- or context-specific risks but are complex and technically demanding. In general, the larger the uncertainty, the more complex the modeling.

A fourth approach is a structural model–based approach that uses option-valuation techniques. In this approach, default is assumed to happen when the asset value of the entity falls below its liabilities (Merton 1977). Chile uses this technique for valuation of exchange rate guarantees to concessionaire for its infrastructure projects. The technique has limited application for guarantees to individuals or government-owned entities.

[8]Most statistical analysis–based models are adaptations of "Altman Z-score" developed by Edward Altman for predicting the bankruptcy of firms (Altman 1968).

Box 4 Credit Risk Valuation in Colombia and Turkey

In Colombia, the law empowers the government to guarantee the payment obligations of public entities. Guarantees are issued with the concurrence of the National Council for Economic and Social Policy—a group of ministers—and with the approval of the Congressional Commission on Public Credit. The Ministry of Finance and Public Credit (MHCP) routinely conducts credit risk assessment of its guarantee portfolio. Externally assigned credit ratings are used to determine the default probability and loss given default. The value of a portfolio of guarantees is computed by summing up the expected loss and the unexpected loss at a 99.9 percent confidence interval. The expected loss is determined by multiplying the exposure at the time of default with the default probability and a factor representing the loss given default. The unexpected loss is computed using a formula that considers the weighted average life of the portfolio and an asset correlation factor that captures the exposure of the portfolio to the general economic situation. Each beneficiary is required to pay an annual risk-based fee equivalent to the expected loss for the year. The MHCP actively monitors the financial condition of the beneficiaries and reassesses fees every year. Fees are payable for the entire duration of the guarantee and credited to a contingency fund, which provides the first buffer against any payments arising from guarantees.

The Turkish government provides repayment guarantees and on-lent foreign financing to support local governments, state-owned enterprises, nonbudgetary funds, investment and development banks, and public banks. The Turkish Treasury uses a logit regression model to measure risks. The model uses financial ratios and past track record to estimate default probabilities. The model is calibrated for each major category of beneficiary institutions. Based on the default probability, beneficiary institutions are placed in one of the six predefined risk categories. A recovery rate is estimated based on a combination of nonrestructured and restructured cash flows. The expected loss is then computed using the default probability, recovery rate, treasury funding curve, and cash flow projections. This model-based analysis is expected to determine the guarantee/on-lending limits for an institution; partial guarantee ratio; guarantee/on-lending fees to be charged; and expected flows from the reserve (the risk account), including any required budget transfers into the reserve. The rating assigned to an institution guides the assessment of the prospective guarantees or on-lending requests and the monitoring and reporting requirements to which it will be subjected.

Source: Government of Colombia 1993 and 2015; Cangoz and Balibek 2013.

A simpler alternative approach is to use the market price differential between a guaranteed and a similar nonguaranteed debt as a proxy for bottom-up risk quantification of a debt guarantee. Similarly, market price of an equivalent derivative contract can be taken as a proxy of the value of an exchange rate guarantee. This approach is, however, relatively less relevant for underdeveloped markets, where in general there are fewer references to the pricing of similar instruments without a guarantee. For standardized guarantees, such as guarantees on mortgage loans or deposit insurance, the expected loss is estimated based on the historical default rate for the entire pool of similar guarantees.

The actual approach adopted should depend on the availability of information and the type of guarantee. Because these techniques demand significant technical capacity, simplicity and feasibility given the available capacity should guide the choice of method. Low-capacity environments could start by assessing creditworthiness of guarantee seekers through simple financial analysis using balance sheet and cash flow projections. The objective would be to identify any potential stress on their financial standing and ability to service their obligations. Over time, as capacity increases, more quantitative techniques could be introduced.

Risk assessment is an exercise in estimation based on certain assumptions, and estimates are most likely to differ as the assumptions change. An annual reassessment is, therefore, an integral part of any risk assessment exercise.

A key issue in risk quantification is the choice of discount rate for discounting future cash flows to their present value; this can significantly influence the outcome of the analysis. In principle, the discount rate should be the risk-free rate adjusted for market risk

Box 5 Limiting Guarantees in Brazil

According to Brazil's 2000 fiscal responsibility law, the federal government, states, federal district, and municipalities may grant guarantees in internal or external credit operations. Regarding the federal government, the senate is authorized to establish a limit. For the states, guarantees are limited to 22 percent of the net recurrent revenue (total tax revenue less transfers to other levels of government). Additionally, the following requirement must be observed: (1) the guarantee is subject to a collateral in an amount equal to or higher than the value of the guarantee to be granted. Further, the entity seeking the guarantee must follow its obligations with the guarantor and with its controlled entities; (2) in the event of external credit operation or transfer of foreign resources by a federal credit institution, the requirements to receive voluntary transfers may also be fulfilled; and (3) the central bank is prohibited from granting guarantees to the federal government, states, federal district, and municipalities. A federal governmental entity whose debt has been borne by the federal government or by a state will have its access to new credits or financing suspended until the debt is repaid. Guarantees are required to be reported publicly every four months.

Source: Government of Brazil 2015.

(the undiversifiable risk). However, countries could adopt a more simplified approach using the unadjusted risk-free rate (that is, the rate at which the government borrows). Such an approach is likely to lead to undervaluation, but the error is likely to be less significant than that caused by not making the correct assumptions and not selecting the right model, for example, not knowing which stochastic process the risk factor follows (Irwin 2007).

The IMF/World Bank MTDS analytical tool can be used to model the realization of guarantees as well as evaluate cost and risk of the government debt portfolio with and without guaranteed debt. The MTDS tool is of particular use to developing countries, where simplicity and feasibility given the available capacity are of particular importance.

Comparing Cost with Alternative Instruments

In principle, it is possible to achieve a certain policy objective using a variety of instruments—for example, subsidies or transfers, direct lending, and guarantees—each with its own merit and cost. The budgetary implications, the degree of transparency, and the way associated risks are assigned and managed change with each option.

The choice of instrument should be guided by a well-considered analysis that compares the cost of each of the available instruments on a like-for-like basis. Conceptually, the value of a loan with credit risk equals the value of an otherwise identical risk-free loan minus a loan guarantee. The difference between on-lending and issuing a guarantee is, therefore, often one of form rather than economic substance. In some cases, direct lending may be more cost-effective than guarantees, as private debt may carry a premium for illiquidity. OECD 2005 concludes that if a government's purpose is solely to finance a certain activity, then credit guarantees will typically be inferior to direct lending by the government.[9] In some other cases, the government's policy objective may be better achieved through the use of regular budgetary funds. For example, a subsidy may be a more appropriate and transparent manner of compensating a public corporation for its quasi-fiscal activities (such as directed lending by a state-owned bank). Likewise, an equity injection funded from the budget—rather than on-lending or a loan (or debt) guarantee—may be a more cost-effective form of balance sheet support to a financially distressed public corporation.

Mitigating Risks

Capping the Size

The most common risk mitigation measure that countries take is to establish a limit (Box 5), but practices vary. Limits are applied either on the aggregate stock of guarantees or on the quantum of new guar-

[9]OECD 2017b finds an increasing use of on-lending over guarantees in Denmark, reflecting the cost-effectiveness of the former.

Box 6 Determining Guarantee Fees in the Australian State of New South Wales

The Australian state of New South Wales (NSW) charges risk-based fees for providing debt guarantees to public corporations. The fee charged depends on three variables: (1) the credit rating of the borrowing entity, (2) the applicable guarantee fee rate, and (3) the amount of guaranteed debt.

All public corporations with a total guaranteed debt level exceeding AU$10 million are required to obtain a credit rating annually from a treasury-selected rating agency. To manage the cost of credit rating, corporations with lower levels of guaranteed debt have the option of obtaining an estimate of their credit rating from the rating agency or NSW Treasury. The guarantee fee rate charged to a borrower represents the difference between a market interest rate for a business of similar risk (credit rating) and the cost of debt obtained from the treasury. Rates are calculated based on debt pricing measured by observed monthly average market bond rates for each available credit rating. Where there is not an observed rate, rates are imputed using a straight-line projection from observed rates. A single rate is charged to all debt irrespective of its term; the rate represents a weighted mix of short-term and long-term lending rates. A rate applies to the loan until its maturity or a reset date elected by businesses at the time of establishment of each loan. Where a rate reset is agreed, the prevailing guarantee fee at the time of the reset is that applicable for the credit rating of the corporation. The guarantee fee is determined by applying the applicable rate to the outstanding capital value of debt and is calculated monthly.

Source: New South Wales Government 2014.

antees. Limits are normally applied on the maximum exposure, as they are easier to apply, monitor, and communicate than expected payments-based limits. Limits are specified in fiscal responsibility legislation, organic budget laws, public debt management laws, and in some countries also in annual budgets. They can be standing or reset annually. For example, in Colombia, the law imposes a limit of US$4.5 billion or equivalent (about 1.6 percent of GDP) on the stock of guarantees. A second limit (0.4 percent of GDP) is applied to cap the annual obligations arising from PPP projects, including annuity payments and called guarantees. In India, the fiscal responsibility legislation places an annual cap on central government guarantees of 0.5 percent of GDP. In Turkey, two annual limits are prescribed each year in budget laws: a single limit covering credit guarantees and on-lent external debt, and a limit on on-lent domestic debt.[10] In South Africa and Thailand, guarantees are counted within the debt limit. Besides limiting the risk exposure, a ceiling promotes prioritization by making different aspiring beneficiaries compete with each other.

There is no simple benchmark for setting limits—except that they should be consistent with affordability in the short, medium, and long term. The assessment of the maximum size of the guarantee portfolio should be guided by the medium-term fiscal framework and a debt-sustainability analysis that incorporates scenarios of what may happen with respect to contingent expenditure and debt.

[10]A third limit is applied to the PPP-related debt assumption commitments.

Risk-based Guarantee Fees

Charging a risk-based fee can moderate the demand for guarantees and force greater discipline in their use (OECD 2013). It can also address adverse selection issues. Countries such as Australia (Box 6), Chile, Colombia, Israel, Peru, Sweden, and the United States levy risk-based fees on guarantees.[11] A risk-based fee recognizes that not all guarantees are equally risky; therefore, riskier projects and loans should invite a higher guarantee fee. A fully risk-based fee would equal the expected losses, with a risk premium added for uncertainty. A charge below this price would indicate a hidden subsidy to the beneficiary.[12] Countries such as Colombia, Sweden, and the United States periodi-

[11]Sweden charges a premium, over and above the risk-based fee, for administrative expenses, including the cost of risk assessment.

[12]In Sweden, parliament can decide to waive the guarantee fee, in full or part, under certain circumstances. In that case, the amount waived is appropriated in the budget as subsidy.

cally revalue the guarantee during its term and adjust the pricing to reflect the costs as these are known. A simpler variant, used in some countries, is a flat fee proportional to the face value of the guarantee adjusted for a risk premium. Often this approach involves defining four or five risk categories (for example, low, medium, high, very high), with each category having a standard predetermined fee (in proportional terms). Each guarantee is assessed for risks and categorized into one of the predefined categories, and the respective standard fee is then applied.

Fees should be charged on an annual basis during the entire term of the guarantee. In principle, it does not matter whether fees are charged up front or in installments annually; the present value is likely to be the same. However, an annual charge would allow revaluation and appropriate adjustments.

Guarantee Reserve Funds

Countries with sizable annual exposure to contingencies can consider establishing guarantee reserve funds. Funds could be actual, invested in financial assets (Colombia), or notional with no underlying cash (India, Sweden, United States).[13] Turkey maintains a "risk account" at the central bank. The choice depends on, for example, the rules governing the budget and debt, and whether payments of budget resources into a notional fund can be expected to lead to offsets in other expenditures. A notional fund offers some advantages: (1) there is no underlying cash, so the government's borrowing requirements and gross debt are not affected; and (2) there is no requirement for separately managing the fund's assets and the associated risks.[14]

Decisions on the size of the fund should consider the overall risk exposure from guarantees and the volatility in annual payments. Building an appropriate margin or buffer in the fund—over and above the expected payments—could be useful for absorbing shocks. Reserves are typically funded from guarantee fees and interest income. Budgetary transfers may be required, particularly during the initial years, to cover any deficit in the fund's operations. Over time a fund should be expected to be self-sufficient. In principle, risk-based fees should cover the entire expected cost of a guarantee. Should a government decide to charge less than the full price of a guarantee, the differential amount, representing a subsidy to the beneficiary, should be appropriated and transferred to the reserve. Standardized guarantees are often backed up with reserves.

Other Risk Mitigation Measures

Other common risk mitigation measures include the following:

- **Time- and value-limiting guarantees** – All guarantees should be limited in time and value. This is crucial for facilitating an analytical approach to the issuance and risk management of guarantees. Governments should desist from issuing open-ended guarantees that operate on a "continuing" basis.
- **Partial guarantees and deductibles** – Using a partial guarantee as a tool for risk sharing can contain adverse selection and moral hazard risks. A partial guarantee leaves part of the risk with the lender and thereby increases the lender's interest in controlling credit risk in a sound way. Deductibles achieve the same objective. They must be satisfied before the government pays—that is, the government would pay for the last rather than the first loss. For example, in India, in case of a default of a debt guarantee, the government pays 70 percent to 90 percent of the amount in default; the balance is paid by the borrower. The borrower pays its share first before approaching the government for settling the balance claim (Government of India 2010). In Turkey, except for certain credits, the government guarantees cover up to 95 percent of the agreed credit.[15] In Vietnam, guarantees cannot exceed 80 percent of the project cost. Similarly, in Iceland guarantees are limited to 75 percent of the credit financing needs of a project, with an additional rider that at least 20 percent of the project cost will be equity financed. This effectively limits government guarantees to 60 percent of the project cost.
- **Collaterals** – Countries such as Colombia and Iceland make it mandatory for guarantee seekers to

[13]Notional reserves are below-the-line accounts that are pooled in the treasury single account. They are used effectively for tracking resources. There is no underlying cash, but notional reserves have the effect of setting aside resources that can be used when needed for meeting obligations.

[14]An actual fund invested entirely in the government's own bonds may be straightforward to manage, but its economic substance is not much different from that of a notional fund.

[15]The limit of 95 percent is not applicable to loans and credits provided by regional or international organizations and foreign government institutions. These are fully covered.

Box 7 Budgeting for Loans and Guarantees in the United States

Following the federal credit reforms in the early 1990s, the United States government introduced a cost-based recognition of direct and guaranteed loans in the budget. The agencies are required to include present value of expected costs of loans and guarantees in their budgets. Expected costs are essentially discounted cash outflows—that is, loan disbursements and payments on default of a guaranteed loan, adjusted for inflows (origination fees, repayments, interest receipts, recoveries). The present value is calculated using a discount rate equal to the rate the government pays on its borrowings of a similar maturity; the part of the cost not covered by fees is treated as a subsidy. Appropriations are obtained for the subsidized cost of each loan program. The unsubsidized portion is budgeted below the line as a financing transaction. Subsidy costs are included in the computation of total budget expenditure and surplus/deficit. The subsidy cost is reestimated annually. An automatic appropriation covers any overruns.

Source: Government of the United States of America 2004.

Table 1. Practice on Budgeting for Guarantees

Practice	Examples
Cost-based budgeting	
Countries preparing acrrual-based budgets	Australia, Denmark, New Zealand, United Kingdom
Countries preparing cash-based budgets	Canada, Colombia, Netherlands, United States
Budget provisions for expected payments	Chile, Hungary, Indonesia, South Africa, Russia

post collateral to secure future payments by governments, should a guarantee be called. For example, in Colombia all beneficiaries are required to post sufficiently liquid collateral of up to 120 percent of the guaranteed credit. In Brazil, the central government can retain taxes to be transferred to subnational governments in case of a default.

- **Reinsurance** – Where possible, the cost of reinsurance is a good measure of the risk involved and arguably deters the government from entering high-risk transactions. Belgium, Estonia, France, Moldova, Peru, and Switzerland use reinsurance.

Budgeting for Guarantees

To make the fiscal framework comprehensive, the issuance of new guarantees should be integrated into the national budget plan. Because the cost of all government fiscal actions must be financed from a finite pool of resources, decisions about both cash spending and guarantees should be made jointly as a part of a comprehensive plan. Conventional and contingent expenditures should be evaluated in a comparable manner. Guarantees should be an explicit budget choice rather than an off-budget sideline activity.

Budgeting for guarantees has two main issues to consider: making explicit the cost of guarantees at the time of their issuance and making sure adequate budgetary provision exists for making payments as and when a guarantee is called. There are two main approaches to budgeting for guarantees (and contingent liabilities in general; see Table 1):[16]

- **Cash-based budgeting** involves making budget provisions for losses expected during the year, or over the medium term, because of guarantees issued in the past. Payments expected during the budget year from call of guarantees are estimated and appropriated. Appropriations could be included in a general contingency reserve or, if sizable, obtained as a separate budget line—payments toward guarantees. For payments that are more or less certain, rather than using the contingency/guarantee reserves, specific appropriations should be obtained. Guarantees expected to be called should be identified in the budget documents, and the basis for appropriation should be explained. Cash-based budgeting for guarantees is the minimum that a country should practice. It does not, however, make apparent the true cost of guarantees. By itself, it does not address

[16]See Schick 2002 for a detailed discussion on budgeting for fiscal risks.

any bias in favor of guarantees over other forms of budgetary assistance.

- **Cost-based budgeting** involves estimating and making provisions for the cost (in present value terms) of a guarantee at the time of its issuance (Box 7). Actual payments on called guarantees, as they happen, are treated below the line as financing transactions. This upfront recognition of provisions makes the cost of guarantees—and the element of subsidy involved—more transparent. It brings guarantees under the overall fiscal and budget frameworks, sets aside resources for meeting any future obligations, and corrects any biases in the choice of the spending instrument by putting guarantees on a par with direct lending and grants/subsidies. The approach does not require adopting accrual budgeting in its entirety, but it is selectively applied to guarantees. Budgeting for costs, however, requires higher technical capacity to practice and may not be suitable for low-capacity environments.

Accounting and Reporting for Guarantees

There are two broad approaches to accounting for guarantees. An accrual-based approach requires an upfront recognition of liabilities likely to arise from the issuance of guarantees. International public sector accounting standards (IPSAS 19) require that if there is more than a 50 percent probability that a guarantee will require future payment(s), and the payment(s) amount can be reasonably estimated, then a provision (liability) should be recognized in the financial statement. An expense is recorded in the operating statement and an equivalent liability in the balance sheet. In case of existing guarantees—previously disclosed as contingent liabilities—provisions are recognized in the accounting period in which the change in probability occurs. Payments made in settlement of guarantee claims are set off against the liability. Any likely reimbursement is recognized in the financial statements as an asset only when it is virtually certain to be received.

The amount recognized as a provision should be the best estimate of the payments required (in present value terms) to settle the obligation at the reporting date. The standards require that provisions should be reviewed at the end of every year and, if needed, adjusted to reflect the current best estimates, or reversed if no longer required. For standardized guarantees, provisions are based on the expected loss estimated on the basis of the historical default rate for the entire pool of similar guarantees, minus any expected recoveries.

A cash-based approach, which most countries follow, does not recognize guarantees until they are called. When called, payments made in settlement of a guarantee claim are recognized as expenditure. Guarantee fees charged at origination are recorded as (non-tax) revenues. Countries that maintain a financial balance sheet recognize the assumption of a guaranteed loan as a liability. Subsequent payments made in settlement of claims are set off against the liability. There is no upfront provisioning for likely payments.

The accrual-based approach—the preferred approach—supports upfront recognition and disclosure; however, it is technically more demanding and may not be a realistic option for low-capacity environments, at least in the short-to-medium term. In such cases, the focus should be on enhancing the disclosure of information on guarantees. The IMF's Fiscal Transparency Code requires that a government's exposure from guarantees is regularly disclosed and authorized by law. The code introduces three levels of practices. For a basic rating, countries are expected to annually publish all government guarantees, their beneficiaries, and the gross exposure created by them. A good rating requires—in addition to the requirements for a basic rating—authorization by law of the maximum value of new guarantees or their stock. Building further on these, for an advanced rating, the code warrants publishing information on the probability of call on guarantees.

Countries should be encouraged to disclose the following information on guarantees (IMF 2008):

- A brief description of their nature, intended purpose, beneficiaries, and expected duration
- The government's gross financial exposure—that is, the maximum amount guaranteed, in nominal terms
- The possibility of any reimbursement, recovery, or counterclaim by the government
- Where possible, an estimate of the likely fiscal cost (the net present value of expected payments) and likely timing of flows
- Payments made during and up to the year in settlement of called guarantees, claims established on defaulters, and payments received in recovery from defaulters
- Any fees charged for guarantees
- Receivables from guarantees

Box 8 New Zealand: Reporting of Contingent Liabilities

The New Zealand government reports guarantees along with other contingent liabilities in the notes to its annual financial statements. Contingent liabilities involving amounts of over NZ$20 million are disclosed separately. Any quantifiable contingencies less than NZ$20 million are included in the "other quantifiable" total. Guarantees and indemnities are disclosed as a separate class in the quantifiable contingent liabilities. For each class of guarantees, the report provides information on the nominal value, beneficiaries, and the purpose of the guarantee. Unquantifiable contingent liabilities are disclosed as at the year-end, where they are expected to be material but not remote. The financial statements include a table laying out unquantifiable indemnities by party, instrument, and actions indemnified. Other unquantifiable contingent liabilities are briefly explained item by item.

Source: Government of New Zealand 2017.

The information should be disclosed for all guarantees individually, or as a class where the amounts involved are relatively small (Box 8). The reports should separate existing and new guarantees issued during the year and show any changes to existing guarantees. Classification along the lines suggested in the *Government Finance Statistics Manual 2014 (GFSM)*, Table 4.6 "Summary Statement of Explicit Liabilities and Net Implicit Obligations for Future Social Security Benefits" should be encouraged (IMF 2014). Meaningful presentation helps in assessing the fiscal impact of guarantees.

Countries should aim to report guarantees in a consistent manner throughout the fiscal cycle. Reporting of guarantees can be done through a variety of channels. Most countries report guarantees (along with other contingent liabilities) in their financial statements (Australia, Canada, New Zealand, United States). This is generally a requirement for the countries following international or national accounting standards. Some countries (India, Greece, South Africa) report guarantees in their budget documents. Still others include this information in their medium-term fiscal framework (Colombia, Peru) and in debt reports (Japan, Turkey). Increasingly, countries are preparing fiscal risk statements that include this information (Brazil, Chile, Finland, Indonesia, Kenya, Philippines). Irrespective of the mode, the information should be complete, submitted timely to the legislature, and made available for public consumption. The reports should include guarantees issued by all public entities, including those issued by subnational governments and public corporations, that create contingent liabilities for the government.

Statistical Reporting

Statistical guidelines differ from accounting standards in the way guarantees (and other contingent liabilities), other than standardized guarantees, are treated. Contingent liabilities are not recognized in macroeconomic statistics unless the triggering event is deemed to have occurred. In the *GFSM* (IMF 2014), liabilities on account of loan and other one-off guarantees are attributed to the debtor, not the guarantor, until the guarantee is called. However, a one-off guarantee granted by government to a financially distressed corporation, with a very high likelihood of being called, is treated as if the guarantee is called at inception, and it is assumed as public debt. This rationale applies throughout the term of a guarantee. If at any time it becomes evident that the beneficiary of a government-guaranteed debt will not be able to repay the remainder of its obligation, a debt assumption of the outstanding principal amount should be recorded. It is the economic substance—and not the legal form—that guides the treatment of guarantees in statistical reports. This principle also extends to any potential claims that the government may have on the beneficiary. Such claims are recognized as assets only when there is a reasonable expectation of their realization.

GFSM (IMF 2014) requires disclosing publicly guaranteed debt and other one-off guarantees (if significant), at nominal value, as a memorandum item to the balance sheet of a government. In contrast, provisions for calls for standardized guarantee schemes are treated as a liability and included in public sector debt (see the previous section).

Box 9 Monitoring of Guarantees in Iceland

The guarantee portfolio of the Iceland government is predominantly comprised of debt guarantees to state-owned enterprises. The State Guarantee Fund (SGF), a separate legal entity established under the State Guarantees Law, is responsible for the management of government guarantees, including its monitoring on a regular basis. The SGF collects from each beneficiary of government guarantees quarterly information on the outstanding amount of the government-guaranteed debt and accrued interest. The two largest beneficiaries—the Housing Financing Fund and the National Power Company—are required to submit this information monthly. Beneficiaries are also required to submit their annual financial reports regularly. Beneficiaries are obliged by law to provide this and any other information sought by the SGF. There are penal provisions for noncompliance. The SGF routinely informs the finance ministry of any breach of guarantee contracts and any likely defaults, and submits an annual report that provides an assessment of the prospects of each beneficiary, a risk assessment, and an estimate of any potential loss to the treasury.

Source: OECD 2017b.

Monitoring

Governments should routinely monitor the financial performance of the beneficiaries of guarantees. At a minimum, the annual financial statements of the institutions receiving guarantees should be analyzed to assess their continued creditworthiness and financial solvency; the aim of this analysis should be to detect any early signs of default. The monitoring should also include watching over compliance with the guarantee agreement, in particular proper use of the guaranteed funds; the timeliness of the repayment of guaranteed debt and other obligations; the balance guaranteed amount; timely payment of guarantee fees; and, in case of a called guarantee, the recoveries to be made (Box 9). Legal safeguards may be built to allow the government to take early action when a beneficiary fails to comply with the terms and conditions of the guarantee, when it does not meet the disclosure and reporting requirements, or when its financial condition appears to be deteriorating.

Strengthening the Institutional Arrangements

Sound procedural regulations help to ensure that guarantees are generally used only when they are more efficient than other forms of support, and are appropriately costed, budgeted, recorded, and disclosed. Countries should focus on the following key elements:

Strengthen the Regulatory Framework

- **Put a ceiling on the overall exposure from guarantees (see the section on mitigating risks).** Limits could be specified in flow terms on issuance of new guarantees and/or in stock terms on their total size. Limits on flows are often easier to administer, particularly in countries that do not have well-established records of the existing stock of guarantees. Where possible, fiscal rules should include limits on guarantees. The design of the rules should ensure that the fiscal implications of guarantees (as well as other contingent liabilities) are taken into consideration in budget decision making.
- **Specify who can approve guarantees.** The authority for approving and issuing guarantees should be clearly defined in legislation or financial regulations. Centralized controls, with the authority to approve guarantees resting with the finance minister, often work better. However, they do not take the accountability for results away from the line ministry or agency seeking guarantee.
- **Specify the disclosure requirements in legislation.** The legal framework should clearly specify who has the responsibility to disclose, what information should be disclosed, and its periodicity and timeliness. It could also clarify mandates for collecting, recording, monitoring, and reporting on guarantees.
- **Specify general terms for extending guarantees.** Regulations could lay down the approach to risk mitigation; guarantee fees to be charged; procedures to be followed in the event of a call on guaran-

tee, including those for recoveries; and monitoring requirements, including information-sharing obligations of the beneficiary and penalty for noncompliance.

Develop Institutional Mechanisms

- **Develop a policy framework.** A government policy on guarantees, specifying when and for what purposes guarantees can be considered, should be developed.
- **Integrate decisions on guarantees with the budget process.** The approval process should require a mandatory consultation with the ministry of finance. The ministry of finance should examine guarantee proposals for their appropriateness, cost-effectiveness, and fiscal impact.
- **Develop capacity to evaluate guarantees.** Ministries of finance should develop capacity to measure guarantee exposure precisely and to adopt approaches to accounting, reporting, and budgeting that properly reflect this exposure. They should be able to cost guarantees and determine the guarantee fees to be charged. They should also develop guidance on the methodologies and assumptions to be used when analyzing guarantees.

  Appropriately locating the risk management function is important. Typically, government debt managers are better equipped to conduct risk assessment. They deal with credit risk assessment in the context of debt and investment management and are expected to possess the required expertise. They are also interested in monitoring the government's overall creditworthiness, which guarantees can affect. Moreover, the pricing of a guaranteed debt can be an indicator of the pricing of government's own debt. Debt management units are often also responsible for recording and monitoring guarantees as part of their back-office functions.
- **Establish adequate budgetary mechanisms for meeting the payment obligations when they arise.** While cost-based budgeting would be ideal, at a minimum, countries should estimate likely payments and provide for them in the budget. Countries with sizable exposure could consider building a guarantee reserve fund.
- **Strengthen the link between the guarantees management framework and the oversight of state-owned corporations and subnational governments,** which are typically the main beneficiaries of government guarantees.
- **Centralize the recording and monitoring of data on guarantees.** A centralized database of guarantees—supported by an information system that ensures data security and traceability—is useful in ensuring the availability of up-to-date information, and facilitates monitoring.
- **Ensure regular disclosure.** Information on the government's exposure from guarantees and other contingent liabilities should be routinely submitted to the legislature and published at least annually.

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