

The Potential Role of Government Debt Management Offices in Monitoring and Managing Contingent Liabilities

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ABSTRACT

As poor management of contingent liabilities has led to significant losses for governments, many now seek to manage them in a more prudent and systematic fashion. Some governments have given the Debt Management Office an important role in managing CL risks, often in close coordination with the Budget Office. The latter can promote budget transparency and discipline, while the DMO can contribute with sovereign risk quantification and management, and together they can contribute to the government's design of a general contingent liability policy. The examples of Sweden, New Zealand, Denmark, Canada and Colombia show how the offices in charge of managing the risks from the country's debt have extended their scope to also monitor and manage risks from contingent liabilities. These examples may be useful for countries seeking to improve the monitoring and management of their contingent liabilities.

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THE POTENTIAL ROLE OF GOVERNMENT DEBT MANAGEMENT OFFICES IN MONITORING AND MANAGING CONTINGENT LIABILITIES

I. INTRODUCTION

Poor management of contingent liabilities (CL) has led to significant losses for governments operating under the illusion that these liabilities could be kept off balance-sheet without representing a major risk. In reality, when different kinds of CL were eventually triggered as a result of movements in the underlying financial and economic variables, enormous payouts resulted in shocks to government's fiscal flows and substantial increases in government debt.

Currently, many more governments are aware of CL risks and are seeking to manage them more prudently within a systematic framework. Some governments have chosen to give the government debt management office (DMO) an important role to play in managing CL risks, albeit in close coordination with the Budget Office. The latter can promote budget transparency and discipline, while the DMO can contribute with sovereign risk quantification and management, and together they can participate in the government's design of a general contingent liability policy. Many DMO have the financial skills and risk-management techniques required for measuring and managing CL exposure, and in some countries the DMO has been made responsible for risk management from a government asset and liability management perspective.

This paper is divided into six sections, including the introduction. Section 2 briefly reviews the reasons why governments have CL in the first place, and concludes that many countries will have liabilities of this type, although with varying degrees of exposure. The three main levels of CL management are analyzed in Section 3, namely: i) general policy ii) budgetary transparency and discipline and iii) financial risk management. Section 4 analyzes the institutional arrangements for managing CL, Section 5 presents country examples where a country's debt management office (DMO) plays an active role, and finally, some brief conclusions are presented in Section 6.

II. CAUSES OF GOVERNMENT CONTINGENT LIABILITIES

A considerable amount of the literature has already covered the reasons why governments have CL. Typically, CL are created when a government decides to extend financial support to other agents in the economy if certain events take place, such as debt default, insolvency, or a fall in revenues below a certain level ¹. Governments provide explicit CL such as guarantees to promote activities considered to be public goods - such as homeownership, education and infrastructure development- by providing incentives for

¹ Although there are also CL that arise from the state's contractual relationship as employer, from judicial processes, and from obligations with foreign institutions (e.g. uncalled capital of multilateral agencies) among others.

the market to finance these sectors or projects. As all or part of the project's risk is taken on by the government, increased funding and/or better financial terms can be obtained for the project or activity than on a stand-alone basis.

Government backing may be especially important for projects with special risk characteristics, such as large-scale projects that require long-term financing and unique projects that make market assessment more difficult. Support of this type is often extended in transition situations, such as in the privatizations of infrastructure projects that had been previously been government operated and funded, and in the case of a number of firms and activities in countries undertaking a major transition from a government-planned to a market economy.

Unfortunately, explicit CL have frequently been used outside of the context of public policy, and more in response to the temptation of having an easy financing mechanism in a budget-constrained environment. In a setting of weak accounting and budget discipline, CL are often excluded from the budget, the balance sheet and liability ceilings, so that their fiscal impact is disguised until they are triggered. Policy makers hope to receive the political benefits of extending government support, while deferring the cost to other political administrations.

Governments typically also have implicit or non-contractual CL, and may have to extend considerable financial support to certain economic sectors in order to avert systemic risk. There are numerous examples of government intervention in the financial sector. Even in countries like the US with having a clear explicit CL with the financial sector in terms of deposit insurance will bail out specific entities because of possible systemic risk (e.g. Continental Bank). Other instances include the governments of Sweden, Mexico, Indonesia, Thailand and Malaysia, which extended significant financial support to their severely weakened financial systems.

Governments are also exposed to implicit CL in the form of a fixed exchange-rate regime, or a currency board. Although they may have been created with a different macroeconomic objective in mind, these government implicitly take upon themselves the country's exchange-rate risk, and, in effect, post collateral against the risk of a devaluation in the form of foreign currency reserves. Economic agents also may be induced to borrow in the pegged foreign currency and this increases the government's exposure to implicit CL in the event of a devaluation. If the potential bankruptcies are sufficiently large, the government may bail out entities not only from the financial, but also the non-financial sector, as was the case with the *chaebols* in Korea.

Implicit CL also arise in response to political pressure, as is often the case when governments bail out regional and/or municipal governments with financial stress. The degree of political pressures may be related to a country's political decentralization, and possibly to the political sensitivity originating in the provision of public utilities. This is not only true for emerging countries: a recent study of G7 country bailouts of sub-

national governments² makes the case that the reason for the bailouts was the possibility of default in the provision of politically sensitive public utilities -particularly where this was a constitutionally guaranteed right- and even more so in those cases where sub-national governments had little discretion over revenues.

The degree of CL exposure of governments may differ substantially as a reflection of political economy decisions, a topic which lies outside this paper's scope. There are probably more pressures for governments of emerging market countries to intervene in the economy through CL because of factors such as a loosely regulated and supervised financial sector and decentralization with little fiscal discipline at the sub-national government level.

As awareness of these risks have grown, countries have taken steps to limit their exposure. For example, New Zealand has strictly limited the government's participation in the economy and promoted market discipline, by having a small-sized government with limited assets in vital sectors and enterprises, with strong autonomy of public entities and restricted CL. The government claims that not even financial system problems represent a contingent claim. Mexico has now prohibited both guarantees and bailouts from the federal to the local governments.³ Colombia has decided to discontinue giving blanket guarantees of various types to private sector involvement in infrastructure development, and now has a policy of risk-sharing with the private sector, and of only taking on certain types of risks. A recent study suggests that governments should simply eliminate guarantees for infrastructure development⁴.

However, it is realistic to assume that many governments will continue to have both explicit and implicit CL. Governments will continue to give explicit support other areas of the economy. Implicit CL are sometimes inevitable, given that systemic risk cannot be ignored and that political pressures can be strong. The point however, is that it is vital that CL be managed more responsibly, within a general policy and strategy, with budget discipline and within a framework of systematic risk-management.

² "Sub- national Government Bailouts in OECD Countries: Four Case Studies" IADB Research Network Working Paper, November 2000, R-399.

³ For decades, the central government absorbed local debts, with the most recent bailout of local governments taking place in 1996-7. In 1999 the federal government brought out a new regulatory framework for debt management by states and municipalities, prohibiting federal guarantees -as well as bailouts- to local governments. Moreover, in order to issue debt, they must obtain credit ratings, and both commercial and development banks must apply a risk weighting based on credit ratings. *Source: "Mexico: State Debt", Oxford Analytica Brief, Jan. 14 2002.*

⁴ In Indonesia, Thailand and Malaysia, infrastructure projects added to the recent crisis, because of the government extensive use of CL to enhance the attractiveness of these projects. However, few countries have succeeded in using a stand-alone BOT model to deliver a significant transportation network, so other solutions are recommended, such as cross-subsidizing different transportation segments. *Mody, Ashoka, "Contingent Liabilities in Infrastructure: Lessons of the East Asian Crisis", IBRD, May 28, 2000.*

III. ELEMENTS FOR MANAGING CL RISK

When discussing CL risk management it is important to start by differentiating between explicit (contractual) and implicit (non-contractual) contingent liabilities. The main element for managing the former is to identify, register, quantify and then budget the expected payouts. For implicit CL, although payouts can be identified and quantified as far as possible, they should not be included in the budget because of the risk of moral hazard. Instead, implicit CL should be made explicit to the extent possible and any remaining exposure should be minimized by ensuring good financial management of the potential beneficiaries, and enforcing their good governance, prudential regulation and supervision.

There are three main interconnected public policy areas for managing CL risk, namely: i) general policy for exposure to CL, ii) budgetary transparency and discipline and iii) financial risk management.

A. General policy for exposure to CL

Governments should design a general policy for providing CL, in which various governmental units may be involved (e.g. MoF, Planning Ministry, Energy Ministry). This is a political economy decision of whether the government will only manage its own narrow balance sheet risk, or, if in addition, it cover risks from other parts of the public sector and even the private sector; what priority sectors should be promoted and subsidized; what kinds of systemic risk should be covered; and how to give an efficient use to a limited government resource, namely financial support.

The Budget Office and the DMO may participate in establishing a methodology for cost estimation and pricing of the CL, in order to establish an equal footing in budgetary terms versus other forms of government support -such as direct subsidies, tax exemptions and loans- so that CL choices do not lessen public finance efficiency. Moreover, the policy should establish criteria for choosing explicit CL over these other forms of financial support. It should also contain guidelines for risk-sharing with the markets (e.g. provide partial guarantees, establish collateral requirements from beneficiaries, reinsuring part of the risk taken on, etc.) in order to impose more discipline, diminish moral hazard and provide other price-fixing mechanisms.

Conditions should be defined for extending guarantees on sub-national and SOE debt, e.g. only after careful analysis of the beneficiary's long-term financial capacity and operational risk; and/or if the beneficiary has received a rating from the rating agencies; and/or if the beneficiary's funding complies with guidelines established by the central government in terms of acceptable loan categories (e.g. well-known funding structure, currency choice, collateralization, etc.). Some governments establish that beneficiaries may not take borrowing risks beyond what the DMO takes in its own borrowing, in order to not expose the government to additional costs as a result of incurring greater financial risk.

As far as possible, implicit CL should be made explicit (e.g. having a deposit insurance for the risk of small depositors). Complementary policies for exposure to implicit CL may involve guidelines for good governance of sub-national government and SOEs (e.g. promote full accountability with controls on indebtedness, proper accounting, disclosure of financial information, and performance measurement). Furthermore, the government may give even higher priority to promoting good governance and risk management in the financial sector, coupled with an effective regulatory structure and tight supervision, given the potential systemic risk of this sector.

The general CL policy may be taken to Congress for legislation. Also, Congress should set an annual limit on guarantees, just as it does with debt in many countries, taking into account the amount of guarantees that it can prudently give in a period subject to a budget constraint, and possibly including central and sub-national government.

B. Budgetary transparency and discipline

Sound budgetary and risk management practice in public liability management depends partly on the liability classification in terms of whether it is direct/contingent, and explicit/implicit⁵

a) For direct explicit liabilities such as debt, it is essential to centralize the data of the aggregate debt portfolio, and include all future debt servicing in the budget.

b) The same data centralizing and budgeting procedures should apply to explicit CL, such as contractual guarantees of SOE/sub-national debt. Unfortunately, in many countries CL are not properly identified and registered, nor are they included in the government balance-sheet and budget. Most of the CL literature has the following recommendations for sound practice in terms of budgetary transparency and discipline:

- Identification, registration and disclosure of all CL, and financial statements of CL provided not only by the central government, but also by sub-national government, SOE, state banks, etc.
- Quantification of each CL in terms of its expected cost. CL are generally recorded as the present value of expected costs for the government, and not as face value⁶. Methods for quantifying

⁵ Hana Polackova's matrix, which classifies a liability as direct if it takes place regardless of specific events, as contingent if it is triggered by a specific event, explicit if there is a contractual agreement to incur the liability, and implicit, if there is no contractual arrangement, and instead the government takes on the liability because of systemic risk, political pressure or the public good. *Polackova, Hana, "Contingent Government Liabilities: a Hidden Risk for Fiscal Stability", World Bank, 1998*

⁶ Exceptionally, a sovereign may decide to record the face value of the CL as an expenditure to discourage its use, as did the Netherlands when guarantees were first incorporated into the budget. New Zealand also discloses its CL based on their nominal value.

expected cost are discussed in detail in the financial risk management section below. Additionally, some governments quantify the maximum probable loss (e.g. corresponding to a 95% confidence interval within the probability distribution of potential losses).

- Inclusion of expected cost or full commercial cost within the budget, as an expense (medium-term accrual accounting is often recommended in this context).
- Charging the beneficiary an explicit fee for the use of the guarantee. The fee may or may not cover the full cost of the guarantee, but the use of fees, together with budgeting the expected cost, makes the subsidy element more transparent. (If the government charges only the expected loss, it will be subsidizing the beneficiary for the risk premium which the market typically charges for the unexpected loss ⁷.)
- In some cases, a special purpose fund is created to provide for the expected payouts of the explicit contingent guarantees. This fund can be financed by a combination of fees and budget allocation.

c) Sound budgetary practice in managing implicit liabilities, both direct and contingent, is to not budget possible government intervention, because of moral hazard implications. However, this does not imply that the government should not evaluate its exposure to these liabilities within a financial risk-evaluation exercise, although possibly in a confidential manner.

C. Financial risk management

If future payments of liabilities are known with certainty –as in the case of domestic currency, fixed interest-rate debt- it is easy to determine their impact on the budget. However, other types of liabilities often involve uncertainty and therefore risk, or variation around expected cost.

⁷ If the expected cost is included in the budget, it is not strictly necessary to have a special purpose fund.. However, for many countries its is a way of establishing budgetary discipline and liquidity reserves for meeting CL, especially if it is sub national governments that are giving guarantees. Even for Sweden, where it is the central government that gives guarantees, and where the guarantee framework is being further rationalized, it is highly probably that a fund will be created, a specific reserve similar to a standalone bank, but with explicit government backing. The initial capital would be provided by the government. In the event that losses exceeded the capital, the government would lose its initial investment, and would go to Parliament to ask for additional payments needed and a new set of capital. Projects would be charged the full commercial rate, and any subsidies for specific projects would be given by the government directly to the project company. The government would expect to receive dividends on its risk capital (equivalent to expected return on its capital (H), times additional probable loss = maximum probable loss-expected probable loss.

When liabilities involve uncertainty -because they are contingent on an event, or denominated in foreign currency, or involve a floating interest rate or are indexed-leading DMO normally simulate different future scenarios for their payment, calculate their probability distribution, and evaluate both their expected cost and risk, and the possible impact of payments on the budget. The main objective is that of minimizing cost within the government's parameters for risk tolerance. In turn, the main criteria for determining risk tolerance tends to be the impact on the government's net revenues because of the implications for future taxes or government spending or, in the worst cases, the potential for default. This means that staff from the DMO and the Budget Office should be able to estimate how payment of different types of contractual and non-contractual liabilities will affect medium-term fiscal revenues.

For direct debt, for example, leading practitioners in debt management normally analyze debt servicing costs to calculate an expected cost and its possible volatility. Alternative debt portfolios are evaluated for their risk and cost characteristics, and a preferred structure chosen in terms of currency, duration, principal repayment profile, etc. Other debt management objectives such as developing the domestic debt market may also influence the final debt portfolio structure.

For CL, the purpose of the analysis is the same -to calculate expected cost and risk- and the general technology for this analysis is the same as that which is used for simulating costs and risks of debt portfolios. The exercise is somewhat more complicated, however, because the analysis or simulations must include not only an analysis of the government's financial exposure, but also a credit risk or default analysis.

Expected cost of CL

The expected cost of a guarantee, for example, is calculated as the financial value of the exposure on the guarantee, times the probability the beneficiary will default, discounted from the date when the guarantee first becomes callable. In turn, the default probabilities can be determined by a) obtaining default probabilities from rating agencies, b) actuarial calculations, if there is a large enough sample and continuity through time or c) stochastic simulation e.g. contingent claims analysis, which simulates scenarios and determines payment under different scenarios. Because the exposure on the guarantee also has a stochastic value (such as on a guarantee of debt) calculating the expected cost might involve a joint simulation of the value of the exposure and the likelihood of default.

Unexpected cost (risk) of CL

The same contingent claims analysis helps establish the possible risk of the guarantee, by quantifying the maximum probable loss (e.g. corresponding to a 95% or 99% confidence interval within the probability distribution of potential losses). The difference between the maximum probable loss and the expected cost is the amount that governments may choose to reserve, and is equivalent to the "risk capital" of a financial intermediary. When the government sets up reserves,

however, it must decide on whether they will be based on the additive unexpected loss of each guarantee (assuming a perfect correlation between all guarantees), or on a portfolio approach which accounts for diversification benefits (namely, less than perfect correlation).

Portfolio Analysis

The analysis of expected loss and risk of CL might be done on a guarantee-by-guarantee basis or as a portfolio. This is relevant when analyzing, for example, the appropriate amount to maintain in a provisioning fund: in the worst case, the expected cost of all guarantees would be perfectly correlated, in which case, the appropriate amount to cover expected losses would be the sum of the expected loss on each guarantee. But in reality, the expected losses likely have less than perfect correlation, in which case, a lower amount of provisions might be appropriate, based on an analysis of the actual correlations and the resulting diversification benefits.

A second application would be to incorporate the cost and risk analysis of CL into the risk analysis of the debt portfolio. As with debt, the expected costs and risks of most explicit CL are correlated with financial variables, such as interest rates or exchange rates. This is largely because the instrument being guaranteed is often a financial instrument, such as a loan or a bond, and the government's potential exposure is therefore a function of future interest rates and/or exchange rates. But the probability of default might also be affected by financial prices. Methodologies such as contingent claims analysis used to analyze expected cost and risk of CL also result in an estimation of the correlations between these variables and interest and exchange rates. These correlations can then be used to incorporate this analysis into the overall analysis of the government's debt portfolio, which would then permit a more efficient management of the joint cost/risk tradeoff of debt and CL.

Ideally, a similar exercise might be done for implicit CL, although confidentiality would be important in order to reduce moral hazard. One example of implicit risk quantification is that of rating agencies that quantify the potential bailout cost of the financial sector; the government would benefit from including this cost in their wider financial risk analysis. However, as already mentioned, managing implicit CL has more to do with regulating the potential beneficiary and monitoring compliance and good governance.

There are other areas of financial risk management that are sometimes carried out by DMO, relating to credit risk exposure, funding risk and operational risk:

- DMO often are responsible for evaluating and monitoring credit exposure to the central government generated by its guarantees to debt of sub-national government and SOE. In some countries the central government requires that the beneficiaries have ratings from well-known rating agencies. Sometimes the government carries out its own evaluation of the beneficiary's capacity to service its debt, both when deciding whether to

give the guarantee, and also during the guarantee's life, so as to detect changes in creditworthiness –which can lead to changes in the guarantee premiums charged by the government.

CL credit risk management may also involve controls on the type of indebtedness of the beneficiary of the guarantee, in order that it not assume exchange rate risk, or enter into unusual contractual liabilities with unknown risk parameters.

- In addition, governments may wish to manage funding risk in terms of coordinating the guaranteed debt issuance by sub-nationals in the international markets. Issuance should be orderly and also coordinated with central government issuance. Pricing by the market of government-issued and government-guaranteed debt should be similar. Thus, the DMO should monitor the impact that guaranteed debt can have on the country's positioning in the markets, so as not to erode it in any way.
- Some DMO also are charged with managing the fund for provisioning against future payouts and may even have a P&L for this, in order to create more transparency and discipline. In this case, the DMO must ensure adequate operational risk management of the fund itself, in terms of monitoring that premiums are received, that payouts on triggered guarantees are promptly paid, etc.

In summary, there are three main levels of CL risk management that complement one another, in terms of financial risk management, fiscal transparency and discipline, and an overall political economy policy for giving CL. The institutional arrangements for managing these elements are discussed in the following section.

IV. INSTITUTIONAL ARRANGEMENTS FOR CL MANAGEMENT

It is convenient to have some kind of centralized institutional arrangement that systematically addresses CL issues in a transparent and explicit manner.

A number of sovereigns have centralized in their DMO the risk quantification and monitoring functions, as well as some policy formulation responsibilities for managing CL risk. The DMO is typically found either directly within the MoF, or as an agency executing the Ministry's debt and risk policy under government guidelines. It seems a logical step to extend the infrastructure available for risk management of direct explicit liabilities, i.e. debt, to contingent liabilities, because:

- The DMO has expertise in funding operations generally, and this is useful in the case of guarantees of loans or bonds.

- The DMO has expertise in risk management techniques (e.g. statistical, financial, modeling), which enable the quantification of the cost and risk of CL. Also, the DMO is already familiar with simulation techniques and with the underlying variables that generate risk for both CL and debt. Moreover, their centralized management enables a portfolio approach and an evaluation of their aggregate impact on sovereign risk.
- In the particular case of central government guarantees on subnational/SOE debt, the risk is the same for the government as borrowing the funds and on-lending them, which is a risk the DMO has to deal with directly.
- In some countries, the DMO is responsible for risk-management of the government's portfolios of assets and liabilities, within a balance sheet framework, which facilitates the management of the portfolio of CL.
- The DMO is often responsible for regulating the liabilities of state and local authorities, and ensuring good risk management practices in SOEs. It may establish guidelines for sub-national/SOE borrowing, coordinate their access to the market, give advice on market conditions and if the government is giving a guarantee on that debt, it will wish to compare pricing in order to ensure comparability with its own issuance, as the credit risk to the lender is equivalent.
- The DMO may also promote liability management models and techniques among the subnationals/SOE (e.g. as in the case of Colombia).
- Typically, all leading DMO are responsible for the centralized database on the government's liabilities, namely, direct debt, guaranteed debt (an explicit CL) and non-guaranteed debt (which is often an implicit CL for the central government).

It is mostly countries that have strengthened their DMO that have taken the additional step of centralizing a large part of CL risk management in the DMO. This not likely to be found in countries which lack a systematic and strategic policy for managing the risk inherent in a debt portfolio. However, once the DMO's institutional capacity has been built up, there may be important economies of scale in terms in managing CL alongside direct liabilities.

The DMO needs an excellent coordination with the Budget Office and possibly with other Ministries and sub-national government, in order to identify and quantify the direct and contingent liability risk that arises in areas strictly outside the central government. The DMO also needs to work closely with government policy-makers, in issues such as determining the government's risk tolerance, namely, defining the level of cash-flow volatility of the debt and CL payouts that is acceptable in terms of budget impact, and congruent with other macroeconomic policy. Table 1 presents one possible distribution of responsibilities among government entities.

Ultimately, the institutional arrangement may depend on a number of factors, including the country's economic vulnerability and macroeconomic policies, the government's risk tolerance, its regulatory framework, the degree of political decentralization, the degree of central government intervention in the rest of the public sector, the government's capacity to manage risk, and the relative financial and risk-management expertise of different government units. Each country will choose its own arrangements, but it should take into account that the CL literature has already pointed out the convenience of having centralized monitoring and sometimes even management of CL risk, so as to ensure that third parties do not increase the government's risk exposure as guarantor of last resort ⁸.

Finally, in any institutional arrangement, an external audit institution should have an important role in publishing the size and characteristics of the CL and monitoring their risk.

VI. EXAMPLES OF THE PARTICIPATION OF DMO IN MANAGING CONTINGENT LIABILITY RISK

A. Sweden⁹

Financial guarantees have been used in Sweden to financially promote projects in the public interest, and since the 1990s, have centered on alleviating the banking crisis and promoting investment in infrastructure. The political issues arising out of these operations are referred to Parliament, which makes decisions on guarantees on a case-by-case basis, and decides in which areas guarantees should be extended.

The central government must also evaluate if it should itself borrow and on-lend, or if it should issue a guarantee on the beneficiary's debt. For this, it takes into account the annual guarantee premiums and subsidies for any project in present value terms so that a comparison can be made with the cost of other economic incentives. It also takes into account other factors, as for example, that guarantees can be more flexible and that the beneficiaries borrowing can be tailored to its own needs, whereas government borrowing must follow public sector borrowing guidelines in terms of currency, interest rate risk and maturities. Also, the guarantees alternative enables the beneficiary to come into direct contact with the credit markets.

The policy for extending guarantees establishes that: i) a long-term assessment of the beneficiary should show it can generate sufficient income to recover its costs, and ii) the

⁸ Other countries have a more decentralized framework for monitoring CL, as in the US where CL are supervised by different agencies. However, even the US tries to centralize an evaluation of guarantees and risk-covering instruments in the Department of Treasury, in order to standardize budgeting procedures and better control their budgetary impact.

⁹ Taken from "Sovereign Financial Guarantees", by Tomas Magnusson, Director and General Counsel, the Swedish National Debt Office. April, 1999.

capital markets are not willing to finance the project at a reasonable price without State support (e.g. projects requiring long-term financing, and/or involving appreciable political risks and/or projects that are difficult for the market to price).

The Swedish National Debt Office (SNDO) is in charge of managing state guarantees. The rationale is that the State should entrust all its guarantee operations, at least guarantees for borrowing abroad, to a single office, which should perform its task as issuer and manager of financial guarantees according to sound economic principles. In 1998, the SNDO took over the responsibility for several thousand guarantees which had been given by country administrative boards, a difficult task as many of the older guarantees had to be revised.

In order to carry out its responsibility in managing state guarantees, the SNDO must ensure it has the necessary competence in the fields of:

- Risk assessment (including credit risk assessment for on-lending)
- Accounting
- Financial law
- Experience of both domestic and international credit markets

There are important links between sovereign borrowing and extending guarantees, which also show the convenience of having the same debt management office manage the guarantees:

Lenders have the same credit risk exposure on a loan to a sovereign, than on a loan to another beneficiary that has a sovereign guarantee, and therefore the pricing of the two loans should be the same. The DMO should monitor and manage this pricing, as it can affect the pricing of its own foreign borrowing.

The DMO should also coordinate access to international markets by both the central government and guarantee beneficiaries and ensure an orderly coordination that will not increase costs. Moreover, the central government may wish to control the market access of some weaker beneficiaries, in order not to send wrong signals of the sovereign's own credit status.

The DMO should coordinate the borrowing operations with issuance of guarantees and promote a consistent policy (e.g. strong pressure to restrict its sovereignty during the term of a loan and also a guarantee).

State guarantees are included in the cross-acceleration clauses of loans.

Because the government is taking on a risk, the SNDO takes an active role in various aspects of the beneficiary's borrowing and in the management of the guarantee commitment:

- It participates in the drafting of the underlying loan agreement, in order to assure a default clause related to the collateral value, and clauses to

prevent the owners of the beneficiary from “milking the property” through dividends;

- It implements risk analysis of the guarantee on a continuous basis;
- It charges the beneficiary for the credit risk of the guarantee, unless a subsidy is involved. The SNDO charges an annual risk premium for the guarantee, as a percentage of outstanding loans, which covers the expenses of drawing up the guarantee -including the cost of the first risk assessment and continuous administrative costs- and the cost of the credit risk.

One or various methods of credit risk estimation can be used. The analysis can take into account historical comparisons of the level of operational and financial risk, based on a risk analysis of the particular beneficiary.

Sometimes the SNDO orders an assessment from a major rating agency, and fixes the premium on the basis of the bond market’s risk margin between borrowers with different rating, assuming a “stand-alone” assessment. This method has been used to calculate the credit risks in road, tunnel and bridge projects. Premiums can also be determined by applying the theories used in option pricing. In addition, by risk-sharing, the premium can be estimated based on the market’s assessment of risk. This latter method has been used by the DMO in pricing pension guarantees. Risk sharing can be achieved by either reinsuring part of the risk, or not guaranteeing the entire credit risk of the lenders.

In order to pay out guarantees once they have been triggered, the government can a) charge the payment against an allocation in normal budget b) borrow the amount off-budget or c) set aside reserves for this purpose. The advantage of creating reserves is that it creates a buffer for future payments, avoiding sudden borrowing or sudden increases in the budget load. Even if reserves are created, it must be possible for the government to use the other two alternatives in contingencies, as the State must always comply with its obligations.

The SNDO has a profit and loss account, and includes all costs and revenues incurred by the guarantees:

- Revenues refer mainly to accrued guarantee premiums. Other revenues might include exchange profits, penalty interest on recourse claims and guarantee premiums, and cancellations of previous reserves set aside.
- The main cost is guarantee payments, and it is entered into the account as a reserve in the moment a significant risk of fulfillment arises, and not after payment is actually made. This creates an incentive for the government to carry out a risk assessment of outstanding commitments at least once a year. In case of guarantees in foreign currencies, exchange losses incurred should be added to the cost. Administrative costs (salaries, consultants’ fees and travel expenses) should also be included.

B. New Zealand¹⁰

The Fiscal Responsibility Act of 1994 required that the government follow a set of principles of responsible fiscal management, under conditions of transparency and accountability, including: i) management of the risks facing the government and ii) achieving and maintaining government net worth, albeit defined in strictly accounting terms.

These balance-sheet risk management objectives were reflected in organizational reforms of the public sector. The Treasury's operational responsibilities included, among others, liabilities management, monitoring of government assets, and the management and production of the public sector's entire balance sheet. The Asset and Liability Management Branch of the Treasury (New Zealand's debt management office) is charged with advising on government financial policy as it relates to government ownership and balance sheet interests. Therefore it is responsible for:

- Managing the Crown's sovereign debt portfolio, providing advice on the performance and management of ownership risks in SOE and advising on the governance of public sector entities.
- Producing the Financial Statements of the Government, which inform Parliament how public resources are being used and reports on its assets and liabilities, together with its revenue, expenses and cash flows and contingent liabilities.
- Monitoring both quantifiable and non-quantifiable CL

CL are given an accounting treatment, inasmuch as they are included in the Budget as an off-balance sheet item, either quantifiable or unquantifiable, depending on their characteristics. Typically, CL consist of guarantees and indemnities, legal disputes and claims and uncalled capital, but most of the CL registered in 2001 corresponded to uncalled capital, and "other quantifiable CL to international finance organizations". Guarantees and indemnities were negligible (less than 1%)¹¹.

However, there is no evaluation of expected or unexpected cost of CL nor including CL in the budget as an expense; rather, they are considered an off-balance sheet item until they are triggered, and only then are they incorporated in the balance-sheet. Thus, the cost to policy-makers is couched more in terms of political scrutiny, and less in terms of financial and budgetary cost.

New Zealand has implemented a policy of narrowly limiting government guarantees and other types of support and of making these very transparent. For example, in order to limit CL risk to the government, SOEs are required to operate according to the principles and procedures contained in the State-Owned Enterprises Act of 1986, that promotes efficiency, commercial criteria and autonomy from the central government. In most

¹⁰ Velandia A and Currie E. 2000

¹¹ Budget Economic & Fiscal Update 2001, New Zealand Treasury website.

cases, the SOEs borrow in their own names and on their own credit, without a guarantee or other form of credit support from the Government. The SOE must disclaim in loan documentation the existence of such guarantees or credit supports.

C. Denmark

The government provides guarantees for the borrowing and related financial transactions of a number of government-guaranteed entities. These are typically companies whose tasks are defined in an act or legal document which also gives access to government guarantees for loans within a certain framework. The companies are typically structured as government-owned limited-liability companies.

The government guaranteed entities are primarily engaged in infrastructure projects, including the Great Belt, The Mortgage Bank of the Kingdom of Denmark, the Danish State Railways, the Danish Broadcasting Corporation. The debt of the Oresund Bridge is guaranteed jointly by Denmark and Sweden.

As the government undertakes risk when it provides guarantees, the borrowing by these entities is subject to guidelines designed to reduce this risk. Guidelines are stated in a set of agreements comprising three elements:

- An agreement between MoF or Ministry of Transport and DMO (the latter is located in the Central Bank)
- An agreement between the Ministry and the individual entity
- A list of acceptable loan categories

The list is drawn up and updated jointly by the MoF and the DMO of the central bank. Within the framework of the set of agreements the Board of Directors and management of each government-guaranteed entity are responsible for the entity's financial transactions and risk management.

The list of acceptable loan categories is based on the following principles:

- Loans must be standard, that is, known and used in the market by reputed borrowers and built on simple elements which make them transparent
- Credit-risk management should be based on a rating-based system
- Agreements must be established on the provision of collateral
- Currency exposure should be limited to euro, although if the entity has future revenue (operating or investment) in other currencies than euro, the entity may borrow in other currencies equivalent to this revenue.

The borrowing of the Oresund Bridge is also subject to guidelines laid down by both Sweden and Denmark. In addition, the Orestadsselskabet, responsible for constructing the new Copenhagen metro and Orestaden, is subject to the same guidelines for borrowing as

applied to government guaranteed entities, although no government guarantee is provided because the entity is a general partnership in which the government is co-owner.

D. Canada

Among its numerous functions, the Department of Finance of Canada manages the public debt, in conjunction with the Bank of Canada, and provides policy advice on activity in the domestic capital markets. It is also responsible for managing CL risk.

About two-thirds of the CL are related to loans and loan guarantees, mostly for borrowing undertaken by Crown corporations. The government's loan and loan guarantee policy was established in 1986, as a response to significant losses incurred in the early 1980's mostly due to ad-hoc loan guarantee programs which resulted in large cash payouts. The government began to implement accrual accounting with the explicit recognition that expenditures needed to be registered for those cases where expected losses of CL could be reasonably estimated.

The CL framework includes a general policy for exposure to CL and mechanisms for promoting budgetary transparency and discipline based on the following principles ¹²:

- *Demonstrated need*: the sponsoring department must demonstrate that the project could not be financed on reasonable terms and conditions without a government loan or guarantee
- *Satisfactory rate of return*: an economic analysis is made to demonstrate that the project's expected cash flow is adequate to cover repayment of the guaranteed debt, interest and operating cost and yield a satisfactory rate of return
- *Real private sector equity at risk*: no project is considered for a government guarantee where private equity sponsors are not supplying a substantial portion of funds required from their own resources.
- *Lender risk-sharing*: bankers should be prepared to lend funds under conditions where they would bear at least 15% of the net loss associated with any default
- *Upside benefit*: where the government is requested to bear significant downside risks, considerations should be given quid pro quo on the upside should the project prove to be successful.
- *Cost recovery*: fees are set for loan guarantees to recover the estimated cost of future losses and help cover administrative costs

¹² Taken from Velandia, A. and Currie E., *ibid.*

- *Budgetary recognition of subsidies and concessions*: with respect to loans, any interest-rate subsidy or other concessions are treated as part of budgetary expenditures
- *Up-front provisioning* for all loans and loan guarantees: the latter will be provisioned up-front at the time that they are made. The provision will be determined based on the risk assessment. Sponsoring departments are required to fund these provisions from either the fees they charge or from their annual appropriations.
- *Approval of MoF and Parliament*: all new loan and loan guarantee programs and changes to existing programs must be approved by the Minister of Finance. Parliamentary authority is required for all new loan and loan guarantee programs. Such programs are subject to a limit that can only be changed by Parliament.
- *Ongoing review and audit*: Departments and Crown corporations are required to submit regular reports on their CL. These are published on an annual basis as notes to the government's financial statements. The estimates of the CL and losses are audited annually by the Auditor General of Canada, who is independent of the government and reports directly to Parliament.

E. Colombia¹³

One of the main CL the government had incurred in recent years was that of guarantees to the private sector for participation in infrastructure development. The guaranteed risks included demand or traffic, price, revenue, cost overruns, inflation, exchange rates, tariff scheme and regulatory frameworks. By 1997 CL in these sectors summed 1.6% of GDP, with actual guarantee payouts exceeding the budgeted amounts.

Then in 1998 Law 448 was passed in order to improve budgetary discipline in the management of these CL, to identify and quantify them, create a Contingent Fund for guarantee payments owed by public entities, and to assure that payments to this Fund by public entities had the same priority as debt servicing. The National Council of Economic and Social Policy drew up a general policy for giving government guarantees.

Within this scheme the DMO (General Directorate of Public Credit) was made responsible for giving a technical support in the quantification of CL. Every public entity can propose a methodology for quantifying the particular CL involved in their project, usually with the help of investment banks, but the DMO must give its approval to the methodology proposed. Based on each particular methodology, which must quantify the expected cost and risk, the DMO draws up a schedule of the CL-related payments that the public entities must transfer to the Contingent Fund in order to assure the necessary

¹³ As a paper is being presented on Colombia's management of CL, only a brief summary will made here.

liquidity for possible CL payouts. Each entity must include these scheduled payments in their budget, and give it the same priority as debt servicing payments. The DMO is not in charge of the Fund's operation, but it does carry out a yearly evaluation of the scheduled payments to the Fund, because of changes in the project's cash flow and in the exogenous variables that were used to quantify risk in the first place.

V. CONCLUSIONS

In the search for improved risk management of CL, governments may give an active role to debt management offices (DMO) in sovereign risk quantification and management as a logical extension of the work they already do for government debt. DMO financial and risk-management skills can be useful in avoiding a breakdown of market discipline because of the government's political economy decisions to intervene in the rest of the economy. The DMO is naturally concerned with the government's creditworthiness and positioning in the markets, which can be eroded by the taking on of more risk in the form of guarantees, for example. As such, the DMO can help to give CL management a degree of market discipline, through

- centralizing the CL data, in order to help the Budget Office establish discipline on the part of all the government entities that are providing guarantees, in terms of budgeting the expected cost (or full commercial cost) in their own budgets as an expense
- helping to estimate the default risk on the guarantee, by means of various methods, including contingent claim analysis, but also by analyzing the beneficiary's long term financial capability and operational risk, and its ratings
- quantifying the expected cost and risk of the guarantee
- pricing the guarantee adequately (possibly with input from the market if the risk of the guarantee is being shared)
- establishing risk-sharing mechanisms such as partial guarantees, reinsuring part of the risk and establishing collateral requirements
- charging the beneficiaries a premium for the guarantee being extended, which may cover the expected cost of the guarantee (or the full commercial cost of the guarantee, in terms of also including unexpected cost); in this sense, the DMO would also be calculating the subsidy being given to the beneficiary
- providing borrowing guidelines to public sector beneficiaries of guarantees so that they do not increase the risk of the government beyond the risk it normally takes in funding
- helping to manage or monitor a special purpose fund created to provide for the expected payouts of the explicit contingent guarantees
- coordinating the guaranteed debt issuance by sub-nationals/SOEs in the international markets, in order that it be orderly and congruent with the government's market positioning

- monitoring the impact that guaranteed debt can have on the country's positioning in the markets in order to avoid its erosion; in other words, ensure similar market pricing of government-issued and government-guaranteed debt
- including the portfolio of CL within the risk management of the government's portfolio of assets and liabilities, within a balance sheet framework, in those cases where the DMO has been made responsible for this type of risk-management

Although these financial skills and techniques are most often seen in countries that have already strengthened their risk management capacity in debt, DMO just starting along this route can also cooperate with their country's Budget Office in promoting transparency and implementing a basic risk analysis. It is possible there are no optimal universal institutional arrangements, but in general sovereign risk management associated with CL will most likely benefit from having an active participation of both the Budget Office and the DMO.

TABLE 1 –AN INSTITUTIONAL ARRANGEMENT FOR MANAGING CL

Debt Management Office	Budget Office	Planning Office	Other ministries, subnational govt, SOEs	Congress
<i>Contribute to methodology for calculating e(cost), pricing CL premiums, and determining collateral</i>	<i>Propose general strategy for CL in public policy terms.</i>		<i>Follow government guidelines for giving guarantees, etc.</i>	<i>Pass legislation for CL: e.g. CL to be included in budget, responsibilities, etc.</i>
			<i>Follow government guidelines for good governance, accountability, etc.</i>	
<i>If there is a Special Purpose Fund with payouts of CL, coordinate it: charge CL premiums; manage costs and revenues; draw up P&L statement;</i>	<i>Push for accrual medium-term accounting</i>		<i>Report CL to DMO and Budget Office</i>	<i>Set an annual limit on guarantees</i>
	<i>Promote disclosure and accountability of CL (e) cost</i>	<i>Work on methodology for unbundling risks and sharing risk</i>	<i>Report financial statements to Budget Office and DMO</i>	
	<i>Ensure proper budget treatment to as to provide equal footing of CL with other forms govt' support</i>		<i>If needed, be rated by rating agencies</i>	
<i>Be responsible for data base on CL, although with inputs from other gov't areas.</i>	<i>Monitor sub-national budgetary provisioning for CL</i>		<i>Pay into Fund guarantee premiums or expected cost</i>	
<i>Coordinate external borrowing of sub-ntl and SOE (timing and pricing if has govt guarantee)</i>	<i>Provide information to Debt Office for updating data base on CL</i>		<i>Seek authorization of DMO for external borrowing with govt guarantee (timing of access etc.)</i>	
<i>Coordinate with Banking Superintendency on monitoring implicit CL of financial sector</i>			<i>Follow guidelines (if any) for debt issuance with government guarantee</i>	
<i>Provide periodic reports on CL to the Minister of Finance, a Risk Management Committee and to Congress</i>				<i>Periodically review CL risk, with government reports</i>

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