APEC Finance Ministers’ Meeting

Australia

August 2-3, 2007

Background papers prepared by the World Bank Staff

July 2007

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Fiscal Risk Management

1. All governments are exposed to financial risks. Their revenues vary with the business cycle, while their expenditure obligations tend if anything to rise during downturns. Many governments now provide insurance against illness, disability, unemployment, old age, and natural disasters. Many guarantee bank deposits and loans to homeowners, students, farmers, state enterprises, and others. Governments may also find themselves intervening to save a failing bank or local government, even when they have no legal obligation to do so.

2. Some government risk-taking is surely beneficial. Government insurance programs, for example, can protect citizens from risks not easily insured in private markets, and the government’s role as an economic shock absorber may help moderate cyclical downturns. But government risk-taking creates problems. Because its long-term fiscal effects are usually hard to discern, risk-taking can be used to disguise subsidies to which taxpayers would otherwise object. For the same reason, risk exposures may mean that governments misunderstand or mistake their true fiscal position, making them more vulnerable to fiscal crises.

3. One cause of these problems is traditional government accounting and budgeting, which focus on cash spending and cash revenues in a single fiscal year and on the stock of conventionally defined debt. This encourages governments to cut back cash spending and instead assume risks that imply uncertain costs in future years.

4. One way of generating better information about government risk taking and stronger incentives for prudent decisions is therefore to replace traditional cash accounting with modern accrual accounting. Modern accrual accounting standards require the reporting of at least some costs that require no immediate cash spending and of at least some liabilities other than conventional debt. But even the best accounting doesn’t address all the information problems. Thus some governments now prepare periodic statements of fiscal risk that describe factors that could cause fiscal outturns to diverge from forecasts. In addition, many governments undertake medium-term fiscal planning, and a few publish long-term fiscal forecasts—both of which can help focus attention on the possible future costs of current decisions to assume risks.

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1 This briefing paper is prepared by Timothy Irwin (World Bank) and Allen Schick (Univ. of Maryland).
5. Yet it is far from settled how governments can best improve the prospects for good decisions about risk bearing. This briefing note aims to stimulate debate by reviewing the issues and offering some ideas for discussion.

The risk-taking state

6. In developed countries, the state bears an enormous range of risks. Through social insurance programs, it indemnifies citizens against loss of income due to illness, old age, unemployment, and other eventualities. It insures bank deposits and often guarantees the repayment of loans made to homeowners, students, farmers, and various enterprises. National governments finance or subsidize health care, and provide assistance when homes or businesses are damaged by natural disasters. They protect public enterprises and some private enterprises from financial collapse. In these and numerous other ways, the modern government accepts risks that would otherwise be borne by households or firms. In developed countries, risk-centered programs generally account for a larger share of national government expenditure than does the direct provision of services.

7. In less-developed countries, governments usually play a smaller role in insuring their citizens, in part because they lack the institutions and financial means to do so. Yet these governments often remain exposed to large risks because of the volatility of their revenues. For some governments, it is volatile economic growth and a narrow tax base that make revenues unstable. For others, it is dependence of the sale of one or two commodities with volatile prices. In both cases, debt-service obligations may remain fixed or rise, since downturns in revenue are often associated with currency depreciation and higher interest rates. Other spending may be difficult to cut quickly.

8. The governments of countries undergoing rapid economic transitions also tend to face large and unfamiliar risks. During emerging market booms, such as that in East Asia in the 1990s, the easy availability of capital and weak regulation may cause financial institutions to engage in speculative excesses. When the bubble bursts and financial institutions become insolvent, governments may be compelled to intervene, at great fiscal cost, despite the absence of any legal obligation.

9. State enterprises are major source of fiscal risk in most countries. Even profitable enterprises create risk, because of the uncertainty of the size of the dividends paid to the government. But many state enterprises are loss-making, and the risk relates to the size of the transfers the government must make. Sometimes governments inject cash in the enterprises. Sometimes they convert their loans to equity (and then later write off the equity). Sometimes they guarantee new borrowing by the enterprises.
10. Although governments bear particular risks in relation to enterprises they own, legal ownership does not define the financial relationship between government and enterprises. On the one hand, corporate taxes mean the government shares in the profits of all businesses. On the other, governments often bear risk in private enterprises that provide public services or that are thought to be strategic for some other reason. When there is a compelling economic or political interest in assisting distressed enterprises, the absence of public ownership will have little bearing on government behavior. Time and again, for example, national governments have aided private banks in order to protect depositors or stabilize capital markets.

11. During the past two decades, governments have privatized or liquidated many state enterprises. These changes may reduce government’s exposure to risk on balance. But they can expose the government to new and unfamiliar risks that it is ill equipped to manage. The government may guarantee the financial results of the privatized enterprises in order to attract high bids from prospective owners. It may indemnify the new owners from specific financial and environmental liabilities. It may take on financial responsibility for employee pensions and other benefits. Because of these and other efforts to smooth transitions to a market economy, the government’s actual shedding of risk may be much less than initially appears.

12. Many governments now enter into public-private partnerships with companies to provide public services once provided exclusively by the state. Such arrangement usually transfer some of the risks associated with the service to the private partner. Yet the government often retains some of the biggest risks. For example, in typical PPPs providing building facilities for schools, hospitals, and prisons, the government agrees in advance to pay for the availability of the building facilities, irrespective of future demand. In other PPPs, including those for toll roads, the government sometimes guarantees the private company a minimum level of revenue from users. This allocation of risks may be reasonable, but it means that the government’s actual shedding of risk is, again, less than might be assumed.2

13. With the development of derivative markets, governments can also hedge currency, interest-rate, and other risks. Derivatives can thus the risks the governments face as a result exposure to risk created by borrowing, and perhaps some expenditure programs, too. But, as the experience of Orange County in California made clear, derivatives can also be magnify and disguise the government’s exposure to risk.

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2 Another briefing note discusses fiscal risks related specifically to PPPs.
14. Central governments are not the only public risk takers. Subnational governments borrow funds, invest fund balances, provide or contract for public services and infrastructure, and enter into financial transactions with firms and households. When subnationals take risks, the central government may be implicated if public services are impaired, or default clouds its own fiscal position.

15. In considering the fiscal linkage of central governments and local authorities, it was once common to distinguish between unitary and federal regimes. The basic notion was that the national government is at risk only when subnational governments are not legally independent. The distinction no longer carries much weight, for the national government almost always is exposed when subnational entities cannot deliver public services or meet their financial obligations. The main factor in blurring the distinction between federal and unitary systems is the vastly enlarged financial and political relationships among levels of government, as reflected in money flows between them, policy mandates from central to subnational governments, and the spread of fiscal decentralization, which shifts revenue and service assignment to local and regional authorities.

16. Fiscal decentralization can easily expose subnationals to greater risk. There often is a mismatch between the apportionment of revenues and the assignment of responsibility for services, especially when subnationals are dependent on discretionary revenue sharing or grants. Because central governments are often implicated in the fiscal problems of subnationals, this increase in subnational exposure to risk is also a problem for central governments. Thus fiscal decentralization, like privatization, can do less to reduce the central government’s exposure to risk than might at first be expected.

17. In many countries, the biggest threat to public finances comes from retirement benefits for public employees and the general population. The risk is greater at present in developed countries because they provide larger benefits relative to gross domestic product than less-developed countries and have older populations. But if low and middle income countries increase retirement benefits as their economies expand, they will also be at risk. At the heart of the fiscal problem is the use of defined benefit schemes, which guarantee a certain payment, typically based on age and past earnings, upon retirement. These plans, which usually work on a pay-as-you-go basis, expose the government to most of the risks of the system, including in particular the risks related to changes in longevity and in the ratio of workers to retirees.

18. Governments created and expanded defined-benefit pension plans during the flowering of the welfare state, when economic growth was strong and retirees were greatly outnumbered by workers. In those buoyant times, it was
deemed appropriate to replace a large fraction of wage income with retirement benefits and to give retirees a share of the benefits of future economic growth. It was not deemed necessary to set aside money to fund the liabilities, for these could be financed when they came due out of the dividends of economic expansion. In recent decades, however, these optimistic expectations have been unsettled by slower economic growth, aging populations, and voter resistance to tax increases.

19. None of this implies that government shouldn’t bear risks. Indeed, the growth of government risk bearing has at least been associated with, and may have helped create, increases in national output, disposal income, and other indicators of economic vitality. Government’s increasing role as a shock absorber has gone hand in hand with greater economic stability and financial security. By spreading some risks widely among taxpayers, and by giving citizens confidence that they will be aided in times of adversity, government risk bearing may have encouraged entrepreneurial risk taking. In countries in which the government does not insure people against adversity and ill health, some citizens may be protected by private insurance schemes, but many others bear by themselves the risks of becoming sick, disabled, or unemployed. It may be no coincidence that risk-taking by entrepreneurs and investors seems limited in these countries. Arguably, the assumption of risk by government has moderated cyclical downturns, which tend to be less severe and briefer than before welfare programs were in place.

20. But risk bearing by government creates problems. First, like all insurance, it causes moral hazard: when government insures against the adverse effect of risk, more risk will be taken. For example, when government guarantees repayment of loans, lenders look to the quality of the guarantee and disregard the credit-worthiness of borrowers; when it indemnifies losses at insolvent banks, it gives depositors an incentive to seek the highest interest rates, regardless of the risk. Second, while some government risk bearing protects those that are widely considered to be deserving, such as the sick or disabled, government risk bearing can also be used to disguise transfers to business and others usually considered less deserving. The problem is that the cost to taxpayers of bearing risks—through government guarantees of loans, for example—is much harder to understand than the cost of cash subsidies, and is therefore less likely to give rise to objections on the part of taxpayers. Third, and closely related, risk bearing can cloud the government’s understanding of its fiscal position. Risk bearing has a cost, but governments usually have little idea of the extent of the cost. That can lead to excessive risk taking, fiscal crises, and harsh adjustments.
Traditional accounting and budgeting

21. One underlying cause of the second and third of these problems is that government accounting and budgeting practices haven’t kept pace with the growing importance of government risk bearing. Essentially, traditional government accounting and budgeting focus on cash flows in the current year, but many risk-bearing programs create obligations that require possible spending in many subsequent years.

22. In traditional budgeting, the executive forecasts its cash revenues for the coming year and seeks approval from the legislature to spend certain amounts of cash on various items. The items may be inputs, such as expenditure on wages and salaries, or they may be outputs, such as schooling. In either case, the government seeks approval to disburse or commit a certain amount of cash in the coming year.

23. Traditional government accounting mostly parallels this approach to budgeting. At the end of each year, the government reports the amount of cash it received and the amount of cash it spent. The fiscal deficit is the excess of cash spending over cash revenues. In addition, traditional government accounting keeps track of the government’s debt, defined narrowly as money owed to banks, bondholders, and others under traditional lending contracts. The liabilities created by agreements to bear risks, such as government guarantees, usually don’t count as debt.

24. Thus a decision to spend cash in the coming year requires the approval of the legislature, and its costs will have to be reported in the government’s accounts at the end of year. In the absence of a commensurate tax hike, the decision will increase the fiscal deficit and the government’s debt. By contrast, a decision to offer a guarantee (or bear risk in some other way) leads to no immediate increase in the reported fiscal deficit or stock of government debt. In many countries, it also requires no approval from the legislature.

25. Governments can thus be tempted to substitute risk bearing for immediate cash spending, even if immediate cash spending would work better than risk bearing. The temptation will be especially strong if the government has set itself the target or reducing its deficit and debt, or agreed with its financiers to do so. The temptation will be greater still if the government charges a fee, to be paid in cash in the current budget year, for the insurance it provides.

Emerging good practice

26. Governments are taking a variety of steps to tackle the problems created by excessive or misplaced exposure to risk. Some of the steps address particular
risk-taking policies. For example, to tackle the risks created by defined benefit pensions, some governments have raised the age of eligibility for full benefits or modified payment formulas. Others have tackled the risk problems directly by shifting pension rights into defined contribution plans that base payments to retirees on the assets in individual accounts. Defined contribution plans are advance-funded by contributions from workers, employers, and (in many countries) governments, but each beneficiary bears the financial risk for the value of his/her account. In pure defined contribution arrangements, the entire risk is shifted from government to pensioners, but the more common arrangement is for government to retain some risk by guaranteeing minimum benefits and/or minimum return for each account.

27. Although reforms of spending programs are ultimately central to controlling exposure to risk, it is useful to focus here on a different kind of reform, namely changes in the information available to governments and others about the risks the governments face. For good decisions about spending programs require officials and politicians to have adequate information about the risks created by the programs. Further, officials and politicians have stronger incentives to make good decisions when the public has information about the government’s exposure to risk and can criticize what they see as excessive or undesirable risk bearing by government.

28. Just as traditional accounting and budgeting create some of the problems of government risk bearing, improvements in accounting and budgeting can mitigate some of the problems. In the last decade or so, many governments have turned away from traditional cash accounting and adopted modern accrual accounting similar to that used by private enterprises. Like cash-based accounting, modern accrual accounting requires governments to report their cash flows, but it also requires the reporting of some noncash costs and revenues. A relaxation in the rules applying to pensions for government employees, for example, can therefore cause an immediate increase in the government’s income-statement deficit. Likewise, under accrual accounting, the definition of a liability is broader than the definition of conventional debt, so some obligations to make uncertain payments in future years show up as liabilities on the government’s balance sheet. Moreover, even when the accounting standards do not require a cost or obligation to be recognized on the face of the accounts, they often require the cost or obligation to be disclosed in notes to the accounts.

29. It’s not easy to describe the precise effects of adopting accrual accounting. Each country has its own set of private-sector generally accepted accounting principles (GAAP), each with their own requirements, and those governments that have adopted accrual accounting have adopted a modified version of local GAAP. But local accounting practices are in ferment. The Europe Union and many other countries have adopted International Financial Reporting Standards
(IFRS), at least for listed companies. Australian and New Zealand governments report, or will soon report, according to versions of IFRS modified locally for use by governments. There is also a set of International Public Sector Accounting Standards available for adoption by governments. To make matters more complex, IFRS themselves are changing, especially in areas that relate to the reporting of risks, such as those associated with derivatives, insurance, and employee stock options. IFRS seem likely to require gradually greater recognition of risk-taking contracts, but such changes elicit strong opposition from firms that would prefer to keep liabilities off their balance sheets, and reduce the reported volatility of their profits, and the outcome of the controversy is uncertain.

30. Some governments have changed their budgeting practices to address the problems of purely cash budgeting. The United States, for example, has changed the way it budgets for many loan guarantees so that Congress must now approve not the immediate cash flows created by the guarantees but the net present cost of the guarantees to the government over the long term. This change goes to the heart of the problem, and largely eliminates any inappropriate incentive to prefer guarantees to cash spending.

31. Accounting and budgeting reforms are sometimes very helpful, but they don’t solve all the problems. For example, although the best modern accrual accounting standards require the recognition of some guarantees, they don’t require recognition of all the kinds of guarantees that modern governments grant. And while the US government’s budgeting reforms are especially impressive, they apply only to loan guarantees, narrowly defined, and don’t capture the costs of two of two large guarantee programs: pension guarantees and deposit insurance. They may also be too administratively demanding to be copied by most developing countries. More fundamentally, accounting and budgeting systems cannot be expected to pick up all major sources of fiscal risk. Variations in future tax revenues and future spending on health and social security are usually two of the biggest sources of fiscal risk. Yet the right to collect taxes is not an asset on any government’s balance sheet, and obligations related to health and social security can be politically important without meeting accounting criteria for recognition as liabilities.

32. Fortunately, accounting and budgeting reforms are not the only way that governments can improve their own, and the public’s, information about fiscal risks. The balance sheets and income statements of accrual accounting are one way of broadening the focus of attention away from a single year’s cash flows. Another way is to retain the focus on cash flows but to extend the horizon of analysis—since fiscal risks ultimately are risks about cash flows. Many governments now do medium-term fiscal planning that considers not just next
year’s expenditure and revenues but those in the following two or three years. This helps, and when government obligations create risks only in the next three or so years, it is sufficient. But obligations created by loan guarantees and public-private partnership may extend 20 or 30 years into the future, while those created by public pensions extend indefinitely. Thus a few governments have begun to publish forecasts of their spending and revenues that extend for 30, 40, or more years into the future, sometimes under the rubric of generational accounts. In a similar vein, some governments conduct debt- or fiscal-sustainability analyses that test whether their policies can be sustained in the long term, or whether they will eventually be obliged to raise taxes or cut spending.

33. In addition, some governments now publish, in a format of their own choosing, an analysis of the fiscal risks they face. Governments that pioneered the use of accrual accounting, such as those in Australia and New Zealand, also publish statements of fiscal risks in which they list some of the ways in which their expenditure might be higher than forecast or their revenue lower than forecast. Such statements can also be published by governments that use traditional cash accounting and budgeting. Chile, which is in the process of adopting modern accrual accounting, has for many years used its budget documents to report on contingent liabilities associated with infrastructure concessions, minimum-pension guarantees, and borrowing by state enterprises. (The IMF’s code of fiscal transparency offers guidance on, among other things, the presentation of information on fiscal risks.3)

34. Fiscal risks come from many sources and in many forms, and it can be difficult for governments to identify and categorize them for the purposes of analysis and disclosure. One device that many governments have found useful is the fiscal risk matrix devised by Hana Brixi (Table 1), which classifies government obligations as direct or contingent and as explicit or implicit.4 Governments may not want to disclose all their implicit obligations, since that may increase moral hazard and the government’s liability, but as we noted earlier, governments cannot restrict their analysis of fiscal risks to those risks derived from purely legal obligations.

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3 See www.imf.org/external/np/fad/trans/code.htm
Table 1 A fiscal risk matrix of government obligations (with examples)

<table>
<thead>
<tr>
<th></th>
<th>Direct</th>
<th>Contingent</th>
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<tbody>
<tr>
<td></td>
<td>Obligation in any event</td>
<td>Obligation if a particular event occurs</td>
</tr>
<tr>
<td>Explicit</td>
<td>Government debt</td>
<td>Government guarantees</td>
</tr>
<tr>
<td></td>
<td>Government liability created by a law or contract</td>
<td></td>
</tr>
<tr>
<td>Implicit</td>
<td>Longstanding and popular social spending that government could, in theory, cut.</td>
<td>Obligation to bail out banks that are too big to fail</td>
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<tr>
<td></td>
<td>A “political” obligation of government that reflects public and interest-group pressures</td>
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Areas for further work

35. For many countries, improving capability to understand and manage fiscal risks is a matter of implementing these examples of good practice. The adoption of modern accrual accounting—according, for example, to International Public Sector Accounting Standards—is no easy task, and it is not the priority for the governments that struggle accurately to report accurately their cash revenues and spending. But in middle- and high-income countries, the benefits of improved accounting and disclosure seem likely to justify the costs. Similarly, many countries can make significant progress simply by adopting medium-fiscal fiscal planning and by preparing and publishing statements of fiscal risks.

36. What more could usefully be done? To make progress, it may useful to distinguish two reasons for generating information on fiscal risks. The first is to help ensure that individual government decisions are justified on cost-benefit grounds, even though their costs are uncertain and delayed. The second is to help ensure that the government does not face an unacceptably high risk of fiscal crisis. For the first purpose, all government programs are of interest; for the second, a few items, such as pensions, healthcare, debt servicing, and tax revenue may dominate the analysis.

37. The first purpose seems likely to be addressed reasonably well by the adoption, and progressive improvement, of modern accrual accounting standards, along with good supplementary disclosures where necessary of the costs and risks of risk-bearing programs. The second purpose, however, is not well served by modern accrual accounting, in part because items such as right to collect taxes do not appear on accounting balance sheets, in part because accounting standards have never been designed with a view to facilitating the analysis of risk.

38. Addressing the second purpose requires at least the development of high-quality, long-term forecasts of fiscal cash flows. Without such forecasts,
discussions of fiscal risks tend in any case to be unsatisfactory, for risks are, according to least one common definition, ways in which outcomes may turn out to be worse than forecast. These forecasts will tend to focus on the largest of the government’s spending and revenue items, and on the linkages between them. Once baseline forecasts are developed, governments can assess their exposure to risk by means of sensitivity analysis, scenario analysis, and, ultimately, stochastic analysis. The best way to do this analysis is, however, an open question. What is the appropriate horizon of the forecasts? How much aggregation in the forecasts in reasonable (what details can be omitted with undue loss of realism)? And how can the forecasts best incorporate uncertainty? The World Bank’s recent work on fiscal sustainability analysis is helpful in this regard.5

39. A final area where more thinking and more experience would be useful is the design of fiscal rules. One issue is whether, given the interconnections between central and local government, fiscal rules should apply to the local and central government as a whole. If so, how should the rules distribute permitted spending between different levels of government? Or is the development of financial reporting for all levels of government (as provided by the IMF’s Government Finance Statistics Manual 2001) sufficient? A second issue is whether fiscal rules should be based on measures generated by accrual accounting, such as the government’s net worth and its income-statement deficit. Fiscal rules based on cash deficits and conventionally defined debt heighten the incentives that traditional cash accounting gives governments to prefer risk-bearing to current cash spending. But what problems arise in practice with fiscal rules based on net worth and the income-statement deficit? Should fiscal rules make reference to a combination of traditional measures (the cash-flow deficit and debt) and accrual-accounting measures (the income-statement deficit and net worth)? Or is it possible, and preferable, to develop robust, practical fiscal rules based on long-term forecasts of fiscal cash flows?