Public Debt Sustainability in Developing Asia

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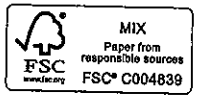

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Contents

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Abbreviations and acronyms

ADB	Asian Development Bank
AFC	Asian financial crisis
AMC	asset management company
CDS	credit default swap
CIT	corporate income tax
CPI	consumer price index
DSA	debt sustainability analysis
DSPB	debt stabilizing primary balance
EME	emerging market economy
FGLS	feasible generalized least squares
FY	fiscal year
GDP	gross domestic product
GFC	global financial crisis
GFS	Government Finance Statistics
ICOR	incremental capital output ratio
IMF	International Monetary Fund
IRGD	interest rate–growth differential
JSB	joint-stock bank
LIC	low income country
MOR	Ministry of Railways
ODA	official development assistance
OLS	ordinary least squares
NPL	nonperforming loan
PBOC	People's Bank of China
PPP	public–private partnership
PRC	People's Republic of China
SGMM	system general method of moments
SOCB	state-owned commercial bank
SOE	state-owned enterprise
US	United States
VaR	value at risk
VAR	vector autoregression
WEO	World Economic Outlook

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7 Conclusions and other country perspectives

*Benno Ferrarini, Raghbendra Jha, and Arief Ramayandi**

Introduction

To combat the recession that accompanied the global financial crisis (GFC), most major countries supplemented automatic fiscal stabilizers with discretionary fiscal stimulus packages. While the global economy has started to recover, these packages, combined with the costs of financial sector and other bailouts and sharp output and revenue losses, have left many countries with large public debt burdens as a long-lasting legacy of the crisis. This is especially true of the United States (US) and several European countries. As noted by Reinhart and Rogoff (2011), the global economy moved from a financial crash to a debt crisis, although Asia was not at the epicenter of the GFC, nor is it at the center of the subsequent debt crisis.

Most developing member countries of the Asian Development Bank (ADB) in the Asia and Pacific region pursued a similar mix of policies, although much less actual support was provided to banks and financial institutions in Asia and there were far fewer bailouts (BIS 2010). As a consequence of the GFC, public debt rose in this region, although not spectacularly as in the US and some European countries. Deficit reduction measures followed this debt accumulation, even as the risk of another global slowdown, if not outright recession, remained high. This is particularly true of Europe but (depending on the slowdown's intensity) the slowdown could spill over to the US and the world economy as a whole (ADB 2011).

This book has inquired into the sustainability of public debt in the Asia and Pacific region and argued that largely because of favorable histories of domestic macroeconomic parameters, major economies in the Asia and Pacific region were able to avoid a prolonged deceleration in economic growth during the GFC. Further, their comfortable fiscal positions enabled them to put into place fiscal stimulus packages without accumulating excessive public debt. Moreover, after the worst impact of the global recession was over, the stimulus packages could be rolled back without causing recession.

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This final chapter provides some tentative conclusions for the issues covered throughout the book plus brief overviews on debt sustainability issues in some economies that are not covered in the country-specific chapters. As much of the previous analyses in the book pertain to the market-access countries, this chapter allocates a specific section to discuss the public debt issues for small and isolated economies in the Pacific region. The Asia and Pacific region's readiness to handle another potential global slowdown, as a consequence of a possible recession in Europe, is discussed.

Public debt and fiscal performance in developing Asia: trends and implications

Although this book emphasizes what happened after the GFC of 2008/09, Chapter 1 looks at a longer period (since 1994) to facilitate an understanding of the underlying trends. The period since 1994 can be divided into three subperiods: (1) that till 2000—the end of the Asian Financial Crisis (AFC); (2) from 2000 to the GFC of 2008/09; and (3) the period since then. The AFC represented a watershed for many countries in the region as they experienced considerable fiscal pressures.[1] Soon after, however, consolidation began and debt/GDP ratios were back to pre-AFC levels by 2007/08. They then slipped again in response to the steps taken during the GFC, and debt ratios peaked in 2009–10. Subsequently, fiscal consolidation resumed.

Public debt ratios across developing Asia have displayed considerable heterogeneity and variation over time. South Asia was the subregion with the highest average debt/GDP ratio in Asia during 1994–2000, and East Asia had the lowest. Since the beginning of the 2000s, however, overall public debt ratios in Asia have been relatively low by developing countries' standards, with the notable exception of South Asia. In most Asian economies, debt/GDP ratios tend to increase following crises as government fiscal balances deteriorate due to the release of fiscal stimulus measures for cushioning the crises' impacts as well as cyclical factors. Such episodes are typically followed by gradual improvements in fiscal positions as governments wind down the stimulus, before debt ratios are eventually lowered. On average, this pattern suggests fiscal prudence in developing Asia in general, where economies tend to react responsibly to increasing debt ratios in the medium to longer term by reining in fiscal positions and lowering debt to more manageable levels when necessary.[2] This, however, does not necessarily rule out the short-term pro-cyclicality of government spending during high growth periods.

Chapter 2 explores in depth the analytical foundations of debt sustainability analysis. The chapter discusses why the fiscal deficit matters and how it is measured and shows that, although the accounting definition of the fiscal deficit is straightforward, there are a number of issues in measuring it accurately. For example, different taxes and expenditures have different effects on aggregate demand and, hence, on the fiscal deficit itself. The fiscal deficit is sensitive to inflation and to phases of the business cycle. Various modes of financing

the deficit (e.g., bond financing, money financing, and external financing) will have different effects on the economy and thence on the fiscal deficit itself. Further, the impact of the deficit can vary depending on whether the deficit arises largely from current as opposed to capital expenditure, for example, on infrastructure.

Chapter 2 then articulates the basic notions of public debt dynamics and fiscal sustainability and develops two broad approaches to debt sustainability analysis—viz., cointegration between public revenue and public expenditure series, assuming they are each non-stationary, and debt sustainability analysis (DSA) in the tradition of the International Monetary Fund (IMF). Particular attention is given to the fact that although in many developing Asian countries the growth rate of the economy is higher than the interest rate, ultimately this gap will narrow, and may indeed be reversed, because otherwise it would be profitable to borrow indefinitely. The chapter also points out some shortcomings of DSAs: in particular the technical difficulty of applying them; insufficient government control over future revenues; the inadequacy of past data for predicting future outcomes; and the recognition that debt may stabilize at levels that are difficult to service, even though such debt is, strictly speaking, sustainable. The chapter also argues that a solvency crisis (defined as a situation in which creditors are unwilling to lend) may arise even when sustainability conditions are satisfied.

Chapter 2 then alludes to evidence that domestic and external debt may be hard to separate in practice, especially if capital accounts are open, resulting in the need to consider consolidated public debt. The chapter then underscores the importance of issues not considered in the book, including Classification and Regression Tree models of fiscal stress; an evaluation of the risk of meeting debt service obligations, including the use of value-at-risk models; problems with debt dilution; an analysis of fiscal stress and the identification of thresholds[3]; the impact of the composition of debt; and broader interpretations of sovereign debt crises. The chapter then underscores the fact that any assessment of the sustainability of debt can only be as accurate as the quality of the revenue and expenditure data available. In particular, many "hidden" liabilities of the government (including contingent liabilities) and the central bank deficit may be omitted from official debt statistics. But revenue may also be reported erroneously. Practices regarding such matters vary across countries. These and other factors underscore the need for doing country-level DSAs that look closely at specific country practices. Chapter 2 thus sets the stage for detailed examination of the DSA methodology (considered in Chapters 3, 4, 5, and 6).

Chapter 3 formally tests for the existence of a fiscal prudence tendency in Asia and confirms that, generally, economies in the region have exhibited responsible behavior in managing their fiscal positions. This behavior has helped the region lower its average debt ratios or at least keep them from rising uncontrollably as evidenced in the trend of the region's average debt ratios since the beginning of the 2000s. The trend was disrupted during the onset of the 2008/09 GFC as governments introduced fiscal stimulus measures to cushion the impact on their economies. However, as economies started to recover, their debt/GDP ratios

seemed to fall back to their declining trend, as indicated by the medium-term projection discussed in Chapter 3.

In addition to relatively responsible behavior in fiscal management, developing Asia has also benefitted greatly from favorable macroeconomic outcomes that deliver high economic growth in a low interest rate environment. This combination has helped to lower the interest rate–growth differentials (IRGDs) into negative territory in many economies, thus helping to reduce their debt/GDP burdens. Although favorable for debt dynamics in the medium term, negative IRGDs usually come with their own hazard. First, as previously noted, a negative IRGD implies that it is profitable to borrow continuously, as intake will always rise faster than borrowing. Thus, the IRGDs ultimately need to turn positive because, so long as the IRGD is negative and the debt/GDP is falling, rational agents will have the incentive to borrow at low interest rates, finance higher consumption, and roll over debt. This situation is unsustainable in the long run. Second, as Chapter 2 argues, a negative IRGD may be the result of financial repression, where official interest rates are kept artificially low. This leads to a distortion in the price of capital and, hence, to a misallocation of capital. Thus, the IRGDs may turn positive, forcing governments to take stringent austerity measures and deeply revise their fiscal targets that were previously deemed sustainable. For these reasons, it appears unavoidable that Asian economies will experience a structural narrowing of the IRGD over time and a sign reversal eventually. Whether any given country will experience this reversal before 2016 (the year to which forecasts are made in this book) is an open question. Further, when public debt is denominated in foreign currency, the IRGD is vulnerable to exchange rate changes.

Given such trends, Chapter 3 applies various DSAs to subregional averages and selected individual economies. The aim is to assess the prospect of debt sustainability in developing Asia over a medium-term horizon. The DSA conducted was based on the latest macroeconomic forecasts of probable domestic and global macroeconomic developments as well as fiscal policy assumptions for each economy under consideration. Although the DSAs are unlikely to depict the exact projection of the debt/GDP ratio with a reasonably high probability of being the actual outcome, they are useful for providing the likely scenario to which future public finances might evolve under the assumptions used in the analysis.

On average, the analyses suggest an overall tendency for public debt to be sustainable in the Asia and Pacific region. This comment does not necessarily hold for each economy individually, but certainly all of Asia's subregions are associated with declining or stable debt paths up to 2016, assuming continuing strong growth, low interest rates, moderate inflationary pressures, and the gradual normalization of fiscal policy after region-wide expansion in the aftermath of the 2008/09 GFC. In general, this assessment holds true based on a comparative analysis of applying a standard DSA to eight economies in the region. The findings from the standard DSA are also broadly in line with the results from applying a stochastic DSA, hence validating the realism of the baseline assumptions underlying the former. The stochastic simulations, however, highlight the presence of a large spectrum

of likely outcomes, not all of which are compatible with the stable or declining debt ratios suggested by the baseline assumptions. The implication for economies with higher risk profiles of public debt is thus to revise their fiscal positions to accommodate future macroeconomic outcomes that may be less favorable than what is reflected in their baseline assumptions.

However, this conclusion is contingent on accepting the reported revenue, expenditure, and debt figures at face value. As indicated in Chapters 2, 4, 5, and 6, because the fiscal positions of several economies lack transparency, the results of the DSA tests are biased toward sustainability.

Issues with assessing debt sustainability in developing Asia

Assessing public finances for the case of developing Asia is a daunting challenge due to huge difficulties in assembling a comprehensive set of fiscal and public debt data for all the countries. Familiar problems include occasional missing observations over time and across economies. Further, consistent and comprehensive fiscal data, particularly about the exact magnitude of public debt obligations are seriously lacking for some economies. In addition, consistent data on interest payments on debt are also not generally available for the actual interest rates on public debt and the extent to which debt may be serviced at concessional or market interest rates. Consequently, fiscal sustainability analysis is based, for the most part, on published data, which may under-report liabilities and hence create a bias toward sustainability.

How to define the coverage of the public sector when analyzing public finance is another issue. While the coverage should encompass all public sector activities, such comprehensive data are rarely available and the coverage of official figures is typically narrow. This narrowness masks the full extent of public debt that may actually pose a serious threat to a country's fiscal sustainability. Examples are provided in Box 7.1 on the Republic of Korea, and in Chapter 5 on India, which discuss the effects of the "below-the-line" items that are not included in the official fiscal data and their implications for estimating an economy's debt profile.

Getting adequate and appropriate information on hidden (off-balance-sheet) liabilities and their associated contingent liabilities is also a problem. Such liabilities are often the source of "fiscal shocks" occurring during economic downturns and become the key factors in affecting fiscal sustainability over time. The realization of these shocks is, in many cases, closely related with unfavorable economic outturns. For example, much of the deterioration in fiscal positions during the AFC was associated with the realization of contingent liabilities in the form of bailouts of distressed banks and other financial institutions and cyclical factors. The omission of hidden or contingent fiscal liabilities implies that the DSA approach adopted in deriving conclusions about sustainability arguably represents the "best case," because accounting for these liabilities would likely lead to higher rather than lower future debt/GDP ratios, and potentially greater threats to fiscal sustainability.

Box 7.1 Government finance statistics of the Republic of Korea*

The Republic of Korea's fiscal situation is known to be relatively sound with its consolidated government primary balance consistently positive at about 2.5% of gross domestic product (GDP) on average during 2000–10.[1] Nevertheless, the country's fiscal data need to be taken with caution as the coverage of government finance is complicated, there is inconsistency between the fiscal balance and the national debt statistics, and various quasi-fiscal activities of public enterprises potentially enlarge the country's indebtedness when taken into account.

Coverage of national debt

The scope of government finance in the Republic of Korea is defined on the basis of accounting and fund units that include only the General Account, Special Accounts, and Funds. In contrast, following the *Government Finance Statistics Manual* of the International Monetary Fund (IMF), major advanced countries define the government sector on the basis of institutional units, which cover not only accounts and funds of central and local governments but also "all nonmarket nonprofit institutions (NPIs) that are controlled and mainly financed by government units" (IMF 2001: 10).

In addition, the Republic of Korea compiles fiscal statistics on a cash accounting basis rather than the accrual accounting basis used in the major advanced countries. Consequently, the country's stated national debt only includes government bonds and borrowings and is thus less comprehensive than that of countries that include accrual accounting items such as build-transfer-lease projects, payables, advances, and withholdings. For these reasons, the scope of government finance needs redefining in order to facilitate international comparisons.

Inconsistency between the fiscal balance and national debt

Most of the annual changes in the Republic of Korea's national debt are unexplained by its fiscal balance figures. During 2000–10 the country's national debt/GDP ratio increased from 31.8% to 36.7%. Not all of the change, however, is explainable by the formula for fiscal debt dynamics that is governed by the consolidated government's primary balance, interest rate–growth differentials and exchange rate depreciation. The residual, which is the difference between the actual and the computed change in debt according to the formula was about 5.2% on average during the period. This discrepancy arises as the country's fiscal balance and national debt figures cover different items.

As summarized in Table B7.1.1, some items are covered by fiscal balance but not by national debt, and vice versa. In particular, fiscal balance excludes all financial liabilities backed by counterpart assets,[2] whereas national debt excludes all liabilities of civilian funds run by nonmarket nonprofit institutions in the government sector. Deficit financing liabilities (to be repaid through taxes) in the

* Box provided by Kiseok Hong, Ewha Womans University, Republic of Korea.

Table B7.1.1 Coverage of national debt and fiscal balance statistics in the Republic of Korea (coverage as of 2010)

	National debt	*Fiscal balance*
General Account (1) Special Accounts (18)	All are covered	All are covered
Funds (64)	40 government funds are covered; 24 civilian funds are not	52 deficit-financing funds are covered; 12 financial liabilities are not

Source: Author's compilation.

general account and government funds are covered in both fiscal balance and national debt statistics. This difference in coverage can account for a substantial part of the aforementioned residual in debt dynamics.

To illustrate, the foreign exchange stabilization bonds, which are financial liabilities issued by the foreign exchange stabilization fund, are covered in the national debt but not in the fiscal balance. The social security balance is a main component of the primary balance of the consolidated government, but has no direct effect on the magnitude of the national debt. Except for small items such as payables and financial derivatives, all assets of social security funds are classified as capital rather than debt. Consequently, a surplus in social security will improve the consolidated government balance, but with no significant change in national debt. The conversion of government guaranteed bonds of the Korea Asset Management Corporation and Korea Deposit Insurance Corporation into government bonds, while directly increasing the national debt, is excluded from the fiscal balance statistics for most purposes (including the IMFs 2004 debt sustainability analysis for the Republic of Korea).

When appropriately combined, the three aforementioned factors—foreign exchange stabilization bonds, social security balance, and the conversion of government guaranteed bonds—account for most of the discrepancy between the actual and the computed change in debt (the residual). The residual and the sum of the three factors are plotted in Figure B7.1.1, which shows a high correlation at 0.83. For 1998–2010, the average value of the residual is 4.5% and for the sum of the three factors it is 3.6%.

Quasi-fiscal activities of public enterprises

Public enterprises' activities in many countries, including the Republic of Korea, often carry de facto fiscal implications. These quasi-fiscal activities may hide the government's true fiscal risk. For example, Korea Land and Housing Corporation and Korea Water Resources Corporation are heavily indebted from government-initiated large-scale development projects, and currency stabilization bonds issued by the Bank of Korea are mainly used to support interventions in the foreign exchange market in essentially the same way as the foreign exchange stabilization bonds are used. Yet, these activities are not included in the government debt statistics.

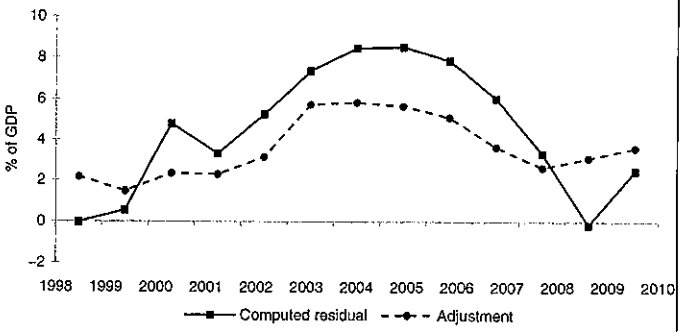

Figure B7.1.1 Debt dynamics residual and adjustment factors.

GDP = gross domestic product.

Source: Author's calculation.

While such factors may not pose an immediate risk to the country's fiscal sustainability, attention to them is needed regarding the fiscal coverage of various funds and social security balances. In particular, it will be important to keep track of alternate measures of fiscal debt that are defined more comprehensively, in addition to the official figures. The Korea Institute of Public Finance (2008) study claims that the country's fiscal risk, when broadly defined to include the unfunded liability of the social security system and various contingent liabilities, amounted to about 75% of GDP in 2007, more than twice the official national debt figure.

Encouragingly, a government-led task force announced in January 2011 a proposal to revise government financial statistics to extend the scope of the general government to cover more funds and public institutions in accordance with the IMF 2001 GFS Manual (KIPF 2011). This is a clear improvement over the previous scope of government finance, although a few issues remain, including the treatment of various quasi-fiscal activities of public enterprises.

Box endnotes

1 Author's calculations based on the fiscal statistics provided by the Digital Budget and Accounting System of the Ministry of Strategy and Finance.
2 These liabilities are repayable through loan recovery and asset liquidation.

Sources:

International Monetary Fund (IMF) (2001) *Government Finance Statistics Manual*, Washington, DC: IMF.

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Hidden government liabilities

Chapter 4 discusses the implications of hidden liabilities on public debt sustainability at length, with particular reference to the case of the People's Republic of China (PRC). The chapter identifies sources for hidden liabilities and discusses the way to go about incorporating them into a standard DSA. The PRC case suggests that the official numbers may understate the magnitude of the economy's actual public debt burden, thus exposing the government to fiscal risks of a potentially increased debt in the future. The figures, however, still appear to be sustainable, as the government's fiscal position provides adequate space for handling reasonable risks and its asset position provides an additional cushion, should more extreme risks materialize.

There are at least two issues in relation to accounting for hidden government liabilities in conducting DSA: their sources and the extent to which they should be counted as debt. The sources of government obligations that have often been referred to as hidden liabilities are as follows:

- *Arrears*—part of debt that is overdue after one or more required payments is missed—are often considered as part of the government's hidden liability, with some certainty in terms of amount due but less in terms of payment timing. However, arrears could occur on the revenue side as well.
- *Contingent liabilities*—which arise from explicit guarantees, deposit insurance, and the like, and must be honored if triggered—tend to be uncertain in terms of both amount and timing.
- *Contractual obligations*—such as government and social security pensions or the purchase of services under public–private partnership arrangements—may be associated with a government intention of honoring them in full but with some policy discretion to alter such intention.
- *Implicit guarantees*—or "stand behind obligations"—arise when a government is forced to step in to bail out the financial sector, state-owned enterprises (SOEs), or subnational governments, or to provide disaster relief. Although experience suggests that governments will step in, these obligations will never be made explicit due to moral hazard concerns.
- *Constructive obligations*—which are at the soft end of government obligations—refer to the services that government is confidently expected to provide, but for which there is no contractual backing.

The extent of government obligations for the liabilities just listed is uncertain, except for arrears. Nevertheless, all these liabilities imply fiscal outcomes that may differ from government plans The deviations from plans may relate to potential sources of future fiscal stress, especially contingent liabilities and off-budget fiscal activities. Uncertainty with regard to both the amount and timing of these potential sources of stress also poses difficulties for determining the extent to which the liabilities should be included in adjusting a standard DSA.

Determining which hidden liabilities should be included in DSA is essential in order to gauge their impacts on debt ratios during times of fiscal stress. Using the PRC as an example, Chapter 4 discusses a possible way of incorporating hidden liabilities into DSA. To do so, hidden liabilities have to be identified and the nature of the fiscal risks they pose determined. Some of the liabilities may have flow implications, mainly in the form of higher spending (e.g., to honor guarantees), while others may have only stock implications (e.g., if a bailout involves an assumption of debt). One issue is whether flows should in fact be converted to stocks, so that the expected future flow costs of contingent liabilities are discounted to the present and included in an augmented debt figure for DSA purposes.

While turning hidden debt into an equivalent amount of actual debt may be appealing, it would be better to work with a debt measure that meets statistical standards, such as the IMF's Global Financial Statistics, and to treat the consequences of hidden liabilities as exactly what they are, expenditures or stock adjustments. In this way, the liabilities can be incorporated into a modified DSA baseline and used for conducting similar sensitivity tests. This is the sense in which DSA looks at a wider range of fiscal risks, such as errors in macroeconomic and fiscal forecasts and policy uncertainty.

More reliable and accurate information regarding fiscally related government activities will help the process of identifying the appropriate size of the debt augmenting hidden liabilities. For that reason, improving fiscal transparency is highlighted as a priority reform area for better gauging the fiscal risks that hidden liabilities entail. Prior to this, however, budgetary reform (in particular, a shift away from cash accounting) is essential before more accurate fiscal accounts can be prepared.

Macroeconomic environment, fiscal vulnerabilities, and debt management

Chapter 5 analyzes prospects for sustainability of India's public sector debt in the medium term, that is, until 2016. Despite India's persistently large fiscal deficits, it has thus far managed to maintain its debt/GDP ratio at a stable though relatively high level. India does not have the problem of incompleteness of budgetary accounts on the same scale as the PRC. The chapter underscores the importance of maintaining debt sustainability and a sound debt position in view of India's high current account deficit and the high risk of having large public debt in the aftermath of the GFC. Mainly as a consequence of a negative IRGD (itself a consequence of financial repression), the chapter predicts that public debt/GDP ratio will fall from 64.1% in 2010 to 61.2% in 2016. India developed its domestic government securities market intensively in order to tap cheap funds and to reduce the vulnerability to external sentiments in managing and sustaining its public debt. As a result, the total public debt is mainly internal debt, which is a major factor in containing India's vulnerability to unfavorable external developments. In addition, this strategy helps lengthen debt maturities and allow more market-determined yields in domestic public debt issuance. A large negative IRGD has been another

major contributory factor in making public debt sustainable. Debt servicing in India is less risky than in many other countries because a predominant share of public sector debt is internal and is held by public sector financial institutions. However, the costs of financial repression are the misallocation of capital and foregone growth opportunities.

The DSA projections in Chapter 5 suggest that this optimistic outlook for India's debt sustainability could be undermined if there were a substantial primary balance shock or an adverse growth shock. Thus, policymakers should not assume that the debt/GDP ratio will continue to fall. The chapter argues that the key to addressing fiscal vulnerabilities would rest on developing effective fiscal institutions that promote government capabilities to take on major fiscal corrections whenever necessary. This includes the ability to create adequate fiscal space (by initiating policies that raise the tax and nontax revenue/GDP ratio), and greater outcome orientation in expenditure policies to cover liabilities that might arise from fiscal surprises. To address fiscal risks and vulnerabilities to maintain debt sustainability, a comprehensive approach would also require fostering fiscal transparency, to bring in more reliable and accurate information regarding the government's fiscal activities and facilitate effective fiscal planning.

Chapter 6 argues that, in the aftermath of the Doi Moi reforms of the late 1980s, Viet Nam enjoyed both good economic performance and good fiscal discipline. However, beginning in the late 2000s, and partly as a result of its response to the GFC, the country's fiscal situation deteriorated and public debt climbed to about 50% of GDP. Hence, there is a need to reduce the fiscal deficit at the margin.

Analysis based on official data indicates that the Vietnamese fiscal situation is already responding to this challenge. However, the analysis does not fully incorporate the several risks and uncertainties that characterize Viet Nam's fiscal situation. As in the PRC case, Viet Nam has issues pertaining to the inadequate treatment of several budget items, such as contingent liabilities and, as in India, has a large and artificial negative IRGD that shows up in a formal DSA as sustainable debt. Hence, although Chapter 6 indicates a sustainable public debt for Viet Nam the number of risk factors indicates no room for complacency in the effort to stabilize the debt.

Realization of fiscal contingencies is closely related with macroeconomic and financial instabilities faced by an economy. This is true not only of countries with a high debt burden, but also of those with relatively low and decreasing debt. Emerging markets have defaulted with relatively low debt/GDP ratios owing to risky debt structures as they engaged mainly in borrowing for the short term and in foreign currency, thus exposing them to interest and exchange rate risks. A benign trend in the debt/GDP ratio can suddenly be reversed due to sharp fiscal deterioration caused by severe internal and external macroeconomic instability. Hence, the structure as well as size of the debt matters.

A striking example is the case of Indonesia around the time of the AFC in 1997/98. The country's total public debt ratio was on a declining trend in the first half of the 1990s before reaching its lowest point at nearly 23% in 1996. The debt

ratio spiked at the onset of the AFC, peaking at 95% in 2000, as the nominal exchange rate (the price of foreign currency in terms of home currency) rose dramatically and the IRGD narrowed. In addition, the crisis forced the Indonesian government to bail out its banking sector to prevent its financial system from collapsing; thus, it had to fund a huge amount of its "stand behind obligations." This "fiscal surprise" had a devastating effect on the country's budget and took significant government effort to clean up.

Chapter 6 provides an in-depth analysis of the risks that macroeconomic instability and contingent liabilities pose to debt sustainability, using the case of Viet Nam. The chapter questions the practicality of the baseline DSA assumptions on the grounds of possible fiscal slippages in response to the less favorable macroeconomic conditions that the country is currently facing, a possible sustained weakening of Viet Nam's real exchange rate, and the narrowing gap between the country's interest rate and economic growth. The analysis shows that Viet Nam's debt prospects are vulnerable to negative shocks on the macroeconomic variables, particularly to deterioration of the exchange rate, as Viet Nam has a high proportion of its debt in foreign currency. Such shocks could materialize due to the confidence crisis that the country is facing. Thus, the chapter analyzes some of the key areas of vulnerability that policymakers need to consider, including provision of a comprehensive allowance for fiscal contingencies; the robustness of the underlying behavior of public expenditures and revenues in the budget positions; and the exposure of the fiscal position to market risks, including refinancing and exchange rate risks.

This discussion suggests that the government could face risks of adverse fiscal surprises related to the emergence of significant (unfunded) contingent liabilities. Such risks are particularly associated with the banking sector, especially the large state-owned banks and some of the newer joint-stock banks, as the budget currently does not explicitly account for such contingent liabilities. Vulnerabilities also come from both the revenue and expenditure sides of the budget, as the revenue is highly dependent on unsustainable revenue sources such as the oil and gas sectors, SOEs, trade tariffs, and land fees. On the expenditure side, the commitment to introduce universal health and social insurance could to increased future expenditure quite significantly. High amounts of spending on subnational infrastructure and public investment projects (which is also the case for India) also add to potential budget vulnerability. These fiscal vulnerabilities on both the revenue and expenditure sides call for further tax reform and broadening of the revenue base.

Short-term market risk could derail the fiscal outcomes from plans through unexpected changes in interest rates, exchange rates, and market liquidity conditions. With debt becoming more sensitive to market risk, prudent practice would require taking into account both the size and the maturity structure of the public debt in considering the fiscal vulnerability issues. When the proportion of foreign currency denominated debt is high, significant currency and maturity mismatches in public debt must be avoided.

If the risks eventuate, Viet Nam could be trapped in persistent fiscal deficits, which is not conducive to keeping public debt in check. To cope with the potential fiscal risks, countries' abilities to manage their debt effectively are important, implying a need to strengthen the structure of fiscal institutions and approaches taken to fulfill the requirements for financing development.

Debt sustainability issues for small, isolated countries: the case of Pacific Island economies*

The DSA discussions throughout the book have focused mainly on economies that are able to access the market to raise debts for filling their financial gaps. Although most of the DSA implications are applicable to small and isolated countries, some differences need to be taken into account when analyzing their debt sustainability issues. For example, narrow export baskets heavy in natural commodities, external price shocks and natural disasters, and limited access to international credit markets are typical sources of vulnerability for the small island economies of the Pacific, with a significant bearing on public debt sustainability. Some of these vulnerabilities are stylized in this section, with main focus on the smallest among Pacific Islands,[4] less so on Papua New Guinea and Timor-Leste, which are comparably large economies in the subregion, endowed with significant natural resources and with better access to the international capital markets.[5]

Economic vulnerability

The geographic and physical characteristics of the Pacific island economies are a major factor in the evolution and sustainability of sovereign debt in this subregion. Pacific subregion economies are small and isolated; the largest country in terms of population is Papua New Guinea with 7 million people; Nauru and Tuvalu have only about 12,000 inhabitants. Further, many of the countries in the subregion are fragmented and consist of a large number of small islands, sometimes separated by substantial distances, which presents major transport and communication challenges.

These characteristics make them extremely vulnerable to external shocks. Increases in oil and food prices almost immediately result in inflationary pressures to the extent that economies are net importers of these commodities. Earthquakes and typhoons damage farms, roads, ports and towns, requiring large amounts of discreet financing to rehabilitate and large spikes in imports of capital equipment and materials for reconstruction. In some years, damage in the Pacific has been catastrophic, for example, amounting to an equivalent of more than 30% of GDP in Samoa and Vanuatu. The small market size of countries in the subregion implies

* A background note underlying this section was contributed by Paul Holden, The Enterprise Research Institute, Washington, D.C.

that there is limited opportunity for economies of scale and the majority of what is consumed must be imported.

Further vulnerabilities arise from the dependency of many Pacific island economies on remittances, which in some countries amount to as much as 40% of GDP. The global economic crisis provided a stark illustration of what occurs when remittances decline as a result of the shrinking growth in the economies where migrants are employed. The GDP of several Pacific island countries experienced negative growth as a result, tax revenues fell sharply, and associated budgetary problems arose. Macroeconomic imbalances translated very quickly into budget and balance-of-payments deficits, which must be financed through debt.

Three countries in the subregion have a special association with the US: the northern Pacific economies of the Federated States of Micronesia, Palau and the Republic of the Marshall Islands receive large Compact grants from the US. (Compact grants for the Federated States of Micronesia and the Republic of the Marshall Islands will expire in 2023, and Palau's will expire in 2024.) Grants account for 50%–60% of the overall revenue of these countries under the Compact Agreement and amount to about $250 million. Without the grants, the three countries' fiscal deficits would amount to 15%–30% of GDP. The overall public sector accounts for more than half the economy in each of the three countries. Significant fiscal adjustment will have to be made before the grants expire. The scale of adjustment is mitigated by the existence of trust funds, which had been put in place with the intent of replacing the grants at the end of the Compact Agreement. However, fiscal adjustment is widely perceived as necessary for the case that trust fund returns were not sufficient to fully replace the grants.

The state ownership of utilities, shipping, airlines, and other services adds to debt problems in Pacific island economies. In some countries, the state operates companies in direct competition with the private sector. While some activities (such as power generation) are natural monopolies, the inefficiencies of many SOEs often result in substantial losses that must be financed through direct budget support or debt guarantees. The extent of the problem in some countries is illustrated by the fact that government expenditure constitutes the majority of spending; for example, in Kiribati it is over 80% of GDP and in Tuvalu it is close to 100%.[6] These countries are especially vulnerable to declines in revenue, which concomitantly can easily lead to debt sustainability issues. A factor that is often not considered in assessing the indebtedness of Pacific subregion economies is the contingent liabilities associated with government guarantees of SOE indebtedness. In many cases, the SOEs' accounts are in such poor condition that it may be very difficult to calculate what the liabilities are.

These particular characteristics of Pacific island economies make them especially vulnerable to issues of debt sustainability. IMF Article IV consultation reports routinely raise issues of external debt sustainability for many Pacific countries. In addition, several of the smallest among the Pacific island economies

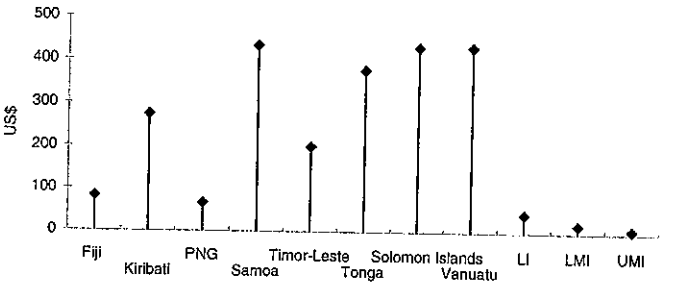

Figure 7.1 Aid per capita: selected Pacific island economies.
LI = low income, LMI = low middle income, PNG = Papua New Guinea, UMI = upper middle income
Source: World Bank's World Development Indicators database.

would face unmanageable debt burdens without the foreign aid on which they rely for budget support. In contrast, Papua New Guinea has just received an upgrade on its debt sustainability analysis by the IMF and is not fiscally dependant on foreign aid flows. Although their share of the overall aid envelope is lowest among the world regions, on a per-capita basis, the Pacific islands subregion receives the world's highest amount of development aid (Figure 7.1).[7]

Reducing debt through faster growth

One of the major factors behind debt sustainability problems in many Pacific countries has been a low rate of GDP growth for an extended period. Productivity growth has been low or negative, often because of the large state presence in these economies. In a number of countries a substantial proportion of the capital stock resides in SOEs, which earn low or even negative rates of return. A recent Asian Development Bank (ADB) study, which compared the performance of SOEs in five Pacific island economies, found that even in Tonga, which had the best performing SOEs, 30% of the country's capital stock was controlled by SOEs but they contributed only 6% to economic growth (ADB 2011b). Divesting inefficient SOEs, or at least putting them on a commercial basis, entering into public–private partnerships, or at least requiring them to earn positive rates of return, would substantially improve productivity and growth rates, which in turn would benefit debt sustainability.

Another factor that would contribute to faster growth and stronger debt positions is promoting private sector development in the Pacific island economies. Many of the subregion's faster growing economies that do not have external debt problems have undertaken reform programs oriented to the private sector.

Sound macroeconomic policies

Sound macroeconomic management is a major determinant of maintaining debt within manageable limits. A number of Pacific island countries had been making progress in debt management prior to the GFC. Inflation had declined and budget deficits were falling. However, the GFC led to a reversal of the improvement, and the impact was especially strong in countries that rely heavily on remittances.

In some countries, public sector payrolls took an increasing portion of government expenditure, which has led to fiscal imbalances. Such countries also face debt sustainability issues. Restoring fiscally sound budgetary policies is an urgent priority for ensuring debt sustainability.

An important policy for supporting better debt management is the implementation of medium-term budget frameworks. Such frameworks bolster fiscal discipline and stability, promote the strategic allocation of fiscal resources in line with priorities, identify future financing needs, and incorporate debt planning into the formulation of fiscal policy. This has knock-on effects, because the frameworks require improved national accounts statistics and macroeconomic forecasting, which are also an essential element of debt management. External financing organizations should both encourage and assist Pacific island economies to implement medium-term budget frameworks based in effective annual budgets, as currently pursued by many countries in the region.

Better debt management

With a few exceptions, debt management in many Pacific island economies is not very efficient, usually because of weak public debt management institutions. Although many countries do have a debt management unit within their Ministry of Finance, which is indeed tracking debt closely, their analysis is not integral to decision making on new debt. Some countries track their external debt less carefully or fail to pay much attention to debt schedules that stretch far into the future. Moreover, debt levels appear in annual budgets in the majority of countries, but there is generally little pressure from civil society or political opposition that would raise concerns and promote alternatives to practices they deem ineffective.

An essential component of well-formulated debt management policy is to calculate the net present value of sovereign debt obligations. This is especially important for countries that receive concessional loans. Currently, one failing of debt management in the subregion is the tendency to believe that loans on favorable terms, with low interest rates and principle moratoriums, do not add to the burden of indebtedness, at least for the foreseeable future; therefore, analyzing repayment schedules takes a backseat to problems that are seen as requiring more immediate attention. In many cases, the Pacific island countries have few opportunities to reduce debt accumulation through diversifying revenue sources because customs collections constitute the majority of receipts, and the small size of their economies means that income tax collections have very high transaction costs.

However, it is difficult to identify with any precision an optimal level of debt. Typically, several indicators of indebtedness are used, but none has perfect predictive capabilities because of variable lags, the exposure to shocks, and the structure of Pacific island economies. Standard indicators that involve exports are of little use in a subregion where remittances, tourism and external assistance are important elements of foreign exchange inflows. Ratios involving GDP are inferior to those using gross national income or gross national product.

The vulnerability of Pacific island economies makes this exercise particularly difficult. The trade-off between investing for the future and ensuring that the level of debt will not balloon out of control in the event of a natural disaster, to which the countries of the subregion are especially vulnerable, is a difficult policy decision, for which there is no single, correct answer. To an extent, aid agencies' grant response to natural disasters softens the debt impact of natural disasters and thereby helps to maintain sufficient fiscal space to allow government a level of comfort in dealing with external shocks. This highlights that the role of funding agencies in the subregion will continue to be essential to compensate for extreme events and to provide assistance to promote faster growth.

Policy lessons and implications

Whereas this chapter has concentrated on how the Asia and Pacific region fared with respect to fiscal sustainability in the aftermath of the GFC, an important consideration is how the region will cope with the current sluggish economic growth, particularly in the eurozone with possible spillovers to the US. This issue is considered in some detail by ADB (2011), simulating alternative recession scenarios in Europe and the US, and their impact on economies in developing Asia.

Among the findings is that the readiness of those economies to respond to downturns in Europe and the US depends on their individual fiscal positions and abilities to use low interest rates and other monetary policy measures to stimulate their economies. In the short term, governments need to take steps to maintain financial stability and prevent market confidence from deteriorating. If the US and the eurozone both go into recession, a more accommodating monetary policy may be called for. Unfortunately, the scope for this may be limited because of high inflation in the region, which has necessitated policy interest rate hikes by several central banks. In addition, because sluggish growth in Europe and the US may persist for some time, the Asia and Pacific region's economies need to rebalance toward domestic consumption with lower reliance on exports and greater reliance on interregional trade. Countries in the region may again have to resort to putting in place targeted fiscal stimulus packages.

As various chapters in the book indicate, over the medium term, debt in most of the key developing economies in the Asia and Pacific region is sustainable. Thus, there is still some latitude to put in place fiscal stimulus packages. However, in view of the current high levels of debt, there is only limited opportunity to

exercise this option without running into issues of insolvency and questioning debt sustainability. Regarding sovereign debt sustainability, this book has highlighted the importance of factoring in uncertainties when analyzing the likely debt paths—uncertainties due to macroeconomic vulnerabilities, both externally and internally, and the lack of knowledge about the fiscal risks from the off-budget fiscal activities that cause vulnerabilities during hard times.

To better cushion the impact of external negative shocks, a government can promote a healthy and liquid domestic government bonds market to tap internal sources of funding when necessary. This will help shield the country from external vulnerabilities. A policy to develop a sound domestic government debt market, however, will also have to be balanced with the need to maintain macroeconomic stability and to manage the domestic debt market optimally to avoid crowding out the private sector.

The success of a domestic government bonds market depends critically on a country's ability to maintain the macroeconomic stability that underlies market confidence. Macroeconomic instability will directly undermine a country's fiscal soundness, hence increasing fiscal vulnerabilities that hinder successful debt market development. Thus, maintaining prudent policies that promote economic growth while minimizing the risk for macroeconomic instability is another natural policy implication for promoting debt sustainability in Asia.

An effective domestic government bonds market could crowd out domestic private investment and hamper growth if it constrains the private sector's capacity to expand its activities. Such a market could also tend to pull up the effective interest rate, with both the government and the private sectors competing for funding. This would increase the IRGD, exerting pressure on the overall government debt and worsening the country's medium-term debt prospects. Striking a balance for the role of government debt to support economic development and stability is equally important for debt sustainability. Therefore, improving the debt management institutions is important, and involves promoting government capabilities to execute fiscal corrections when necessary, fostering fiscal transparency to enhance the government's fiscal planning capacity, and anticipating the potential liabilities arising from fiscal surprises.

Developing Asian economies cannot afford to be complacent in their approach to public debt. This book has emphasized several key areas where governments need to take a proactive approach:

- assuring that the revenue and expenditure accounts of government include all relevant items (e.g. noncontingent liabilities) and maintaining complete and well-managed fiscal accounts;
- placing high on the agenda the improvement of expenditure management, reforming of SOEs, and strengthening of debt management institutions and processes; and
- enhancing efforts to augment tax revenue within an overall program of tax and expenditure reform in these countries.

Notes

1 One aspect of the problem was that not all countries were able to spend their way out of recession reasonably quickly.
2 Although the assessment holds on average, it may not apply equally to all economies in the region. An in-depth analysis is needed for more detailed pictures of each individual country.
3 A related concept is that of fiscal risk used to describe a situation in which the government runs the risk of not meeting its fiscal policy objectives. Hemming and Petrie (2000) consider four aspects of such vulnerability: incorrect specification of initial fiscal position, vulnerability of short-term outcomes to risk, debt nonsustainability in the long run, and structural and institutional weakness affecting the implementation of fiscal policy.
4 Apart from Papua New Guinea and Timor-Leste, the ADB's Pacific developing members include: Cook Islands; Fiji; Kiribati; Republic of Marshall Islands; Micronesia, Federated States of; Nauru; Palau; Samoa; Solomon Islands; Tonga; Tuvalu; and Vanuatu.

   Due to constraints of space, this section does not touch upon a number of relevant DSA issues for small island economies: (i) how to sensibly deal with the significant difference between GDP and gross national income, given substantial offshore revenues from fisheries etc; (ii) how to treat trust funds which are multiples of GDP in DSA; (iii) reliance on domestic debt instead of use of international debt; (iv) risks associated with single or limited institutional holders of government debt, eg., provident funds; (v) exchange rate risk, particularly with increasing level of debt to the PRC.
5 It should be noted, however, that also other countries in the region have been able raise finance on the international markets. Fiji, for example, has been accessing markets since 2006. Other countries with potential access include Cook Islands, Vanuatu, and Samoa. However, these countries tend to raise debt domestically as there is an expectation that this will be a cheaper source of finance and it also typically proves to be scale-appropriate, particularly when amounts of under $10 million or so are being sought.
6 However, this ratio is substantially lower in terms of gross national income, which could be argued to more accurately measure the financial ability of government to repay debt.
7 It may be argued, however, that a lack of aid would not be completely filled by debt, in which case investment projects would just be delayed or dropped.

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