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Chapter II

FISCAL ASPECTS OF THE FINANCIAL CRISIS AND ITS IMPACT ON PUBLIC DEBT

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A. Introduction

The global financial crisis once again brought fiscal policies and, more generally, the role of the State to the forefront of the economic policy debate. After many years of neoliberal policies oriented towards reducing the role of the State in economic management, governments in most countries came under pressure to undertake widespread and massive intervention to rescue the financial sector and compensate – at least partly – for the shrinking private demand. Previous obsessions with fiscal targets or balanced budgets were temporarily forgotten. Yet the virtually unanimous calls for public intervention started to subside when most countries returned to positive growth rates and their focus changed to the deterioration of fiscal deficits and public debt. Less than two years after the collapse of the large investment bank, Lehman Brothers, the financial markets came to view governments' fiscal policy more as part of the problem than the solution.

Public sector accounts have been dramatically affected by the global crisis. In addition to policy-driven fiscal stimulus packages, which typically involved a discretionary increase in public spending and/or tax cuts to counter the macroeconomic impact of the crisis in the financial sector, the crisis itself affected fiscal balances and public debt through several channels. One reason for the increasing public deficits and debts was the operation of automatic stabilizers, in particular reduced tax revenues, which reflected the downturn in economic activity, and, in countries with well-developed social security systems, increasing social expenditure, especially higher unemployment allowances.

In many other countries, fiscal accounts were also strongly affected by other crisis-related factors. On the revenue side, an abrupt fall in commodity prices reduced government income in countries where such income is linked to revenues from their exports of primary commodities. On the expenditure side, currency depreciation and higher interest rate spreads increased the burden of public debt, in some cases significantly. And in several developed countries, to a large extent the rise in public debt is a direct result of the crisis, as governments bailed out ailing financial institutions, which amounted to converting former private debt into public debt. All these factors adversely affected the fiscal balance without delivering significant economic stimulus. Clearly, therefore, the crisis was not the outcome of excessive public expenditure or public sector deficits; rather, it was the cause of the high fiscal deficits and/or high public-debt-to-GDP ratios in several countries.

Nevertheless, some governments have already changed their policy orientation from providing fiscal stimulus to fiscal tightening, while others are

planning to do so, in an effort to maintain or regain the confidence of financial markets which is viewed as key to economic recovery. This policy reorientation comes at a time when private economic activity is still far from being restored to a self-sustained growth path, as discussed in chapter I. Although it is universally recognized that the crisis was the result of financial market failure, little has been learned about placing too much confidence in the judgement of financial market actors, including rating agencies. Many of the financial institutions that had behaved irresponsibly were bailed out by governments in order to limit the damage to the wider economic system. It is therefore surprising that, now that "the worst appears to be over" for those institutions, a large body of public opinion and many policymakers are once again putting their trust in those same institutions to judge what constitutes correct macroeconomic management and public finance.

In any case, the shift towards fiscal tightening appears to be premature in many countries where private demand has not yet recovered on a self-sustaining basis, and where government stimulus is still needed to avoid a prolonged stagnation. Premature fiscal tightening could be self-defeating if it weakens the recovery process, hampers improvement in public revenues and increases the fiscal costs related to the recession and bailouts. Hence, by hindering economic growth, such a policy would fail to achieve fiscal consolidation.

A clear assessment of the roots of the crisis and the evolution of public debt is of utmost importance for elaborating policy recommendations. Focusing almost exclusively on the current levels of public debt risks treating the symptoms but not the causes of the problem. And a wrong diagnosis would not only leave some fundamental problems unsolved, but would also render economic policy ineffective. This chapter examines the recent evolution of fiscal accounts and public debt, both in developed and developing economies, and discusses their relationship with the crisis. Chapter III then focuses on the related policy challenges.

This chapter argues that the recent global financial and economic crisis was not due to profligate fiscal policies, and that the increase in public debt in a number of developed countries was the result of the Great Recession. Primary deficits caused by discretionary fiscal policies were a much smaller contributory factor to higher debt ratios than the slower (or negative) GDP growth and the banking and currency crises. Therefore any policy that seeks to reduce public debt should avoid curbing GDP growth; without growth, any fiscal consolidation is highly unlikely to succeed. These findings challenge the influential "Lawson Doctrine", that financial crises are caused by excessive public sector borrowing, and that private sector debt never poses a problem because it is the outcome of optimal saving and investment decisions.[1] Consequently, the usual corollary of that doctrine, which is that debt crises always require fiscal retrenchment, is also debatable.

Section B of this chapter examines the evolution of public revenues and expenditures before, during and after the crisis in different groups of countries. It discusses to what extent government savings (and dissavings) may have contributed to the build-up of the crisis, and assesses how the crisis itself has affected fiscal outcomes. Countries felt the impact of the crisis in different and specific ways, and their ability and willingness to conduct countercyclical policies varied. The section considers the different challenges facing the major developed economies, the most vulnerable European and transition economies – many of which sought financial support from the International Monetary Fund (IMF), the European Union (EU) and other sources – and emerging market and developing economies, in particular those that rely heavily on earnings from commodity exports for their fiscal revenues. It also examines the various countries' responses to those challenges.

Section C reviews the evolution of public debt in developing and developed countries. It shows that, prior to the eruption of the crisis in 2008, developing countries had managed to sharply reduce their average debt-to-GDP ratios and also made progress towards altering the composition of their public debt by borrowing more domestically than from abroad. The crisis stopped this trend but did not completely reverse it. In developed countries, by contrast, the crisis led to a sudden jump in debt ratios. Lower debt ratios in most developing countries generally had not been due to a reduction in the stock of public debt – except for a number of heavily indebted poor countries that obtained debt reductions – but rather to their rapid GDP growth. Over the same period of time, some developing countries started accumulating large external reserves, so that their ratios of net external public debt to GDP fell dramatically, and previous currency mismatches in their aggregate

balance sheets were corrected. These buffers provided the fiscal and external space that enabled many of these countries to respond to the global recession with various countercyclical policies, whereas other developing countries, especially the low-income ones, did not have similar fiscal space to conduct proactive fiscal policies. This section also discusses the different factors that can cause a debt crisis. It shows that in general the primary budget deficit is a fairly small component of debt growth, the most important factors being those related to balance-sheet effects and banking crises. Section D concludes.

B. Fiscal aspects of the global crisis

1. Fiscal balances and global imbalances before the crisis

Economic crises and fiscal accounts are closely interrelated, although the nature of that relationship is controversial. It is clear that fiscal balances deteriorated significantly in all regions with the crisis, but this correlation does not reveal causality. At a time when several governments and international institutions are adopting a policy of fiscal austerity aimed at reducing their public-debt-to-GDP ratios as a priority, it is important to examine whether such a policy tackles the roots of the problem, or whether it is merely treating the symptoms and forgetting the cause of the illness on the assumption that the illness has already been cured (Aglietta, 2011: 47). In other words, there is a need to assess whether fiscal imbalances were a major cause of the crisis, because they led to overindebtedness or widened global imbalances; or if, in general, fiscal deficits were the consequence rather than the cause of the crisis.

A review of a number of systemically important countries (including developed and emerging market economies) shows that the evolution of government savings[2] is not the main factor behind external imbalances. In the United States, the current-account balance fell steadily, from equilibrium in 1991 to a deficit of 6 per cent of GDP in 2006, in the build-up to the crisis (chart 2.1). Government savings can hardly explain this trend: they first increased significantly between 1992 and 2000, as a result of strong growth of GDP and tax revenues as well as what was then called the "peace dividend"; they subsequently fell due to slower growth and policy shifts that reduced taxes and increased military expenditure, but this shift had no noticeable impact on the current account. The progressive decline of household savings would be a better explanation for the widening current-account deficit, but this alone could not have been sufficient, as discussed below with reference to Japan. Rather, the trade and current-account deficits were more likely the result of a combination of rising consumption – by incurring ever-increasing private debt (which lowers household savings rates) – and the loss of industrial competitiveness. However, the lower household savings were less of a contributory factor than the greater consumption of imported rather than domestically produced goods, which slowed down growth of domestic income, corporate profits and tax revenue for the state and federal governments (*TDR 2006*, chapter I).

Another major developed economy, Japan, has run a current-account surplus every year over the past three decades, with a rising trend from 1.5 per cent of GDP in 1990 to 4.8 per cent in 2007 (chart 2.1). During that period, government savings plunged by 8 percentage points of GDP, and household savings also fell by an equal amount. Thus the country's current-account surplus was clearly not because the Government or households decided to save more. Similarly, in Germany the shift in the early 2000s

Chart 2.1

GROSS CAPITAL FORMATION, CURRENT-ACCOUNT BALANCE AND NATIONAL SAVINGS IN SELECTED COUNTRIES, 1990–2010

(Per cent of current GDP)

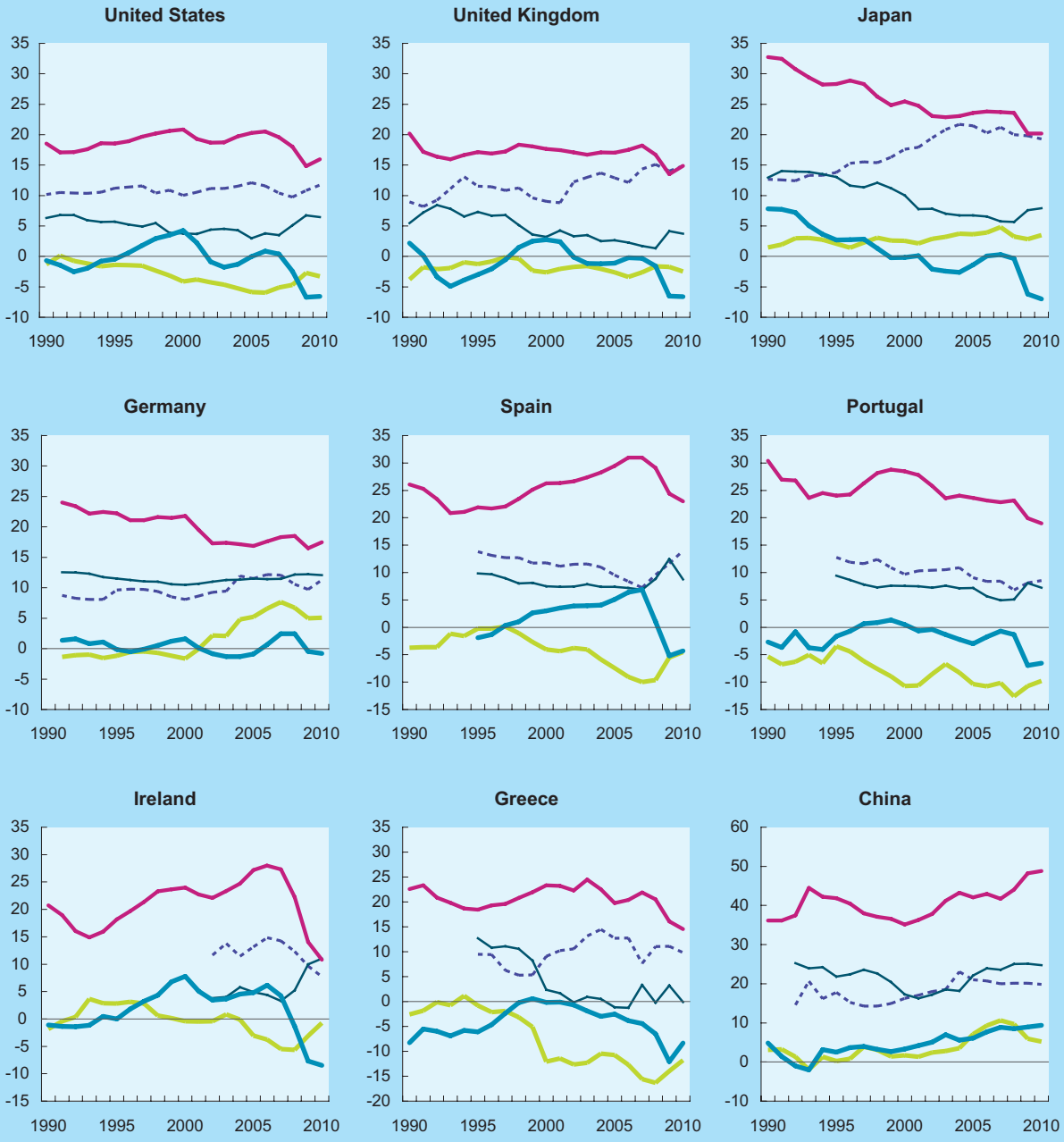
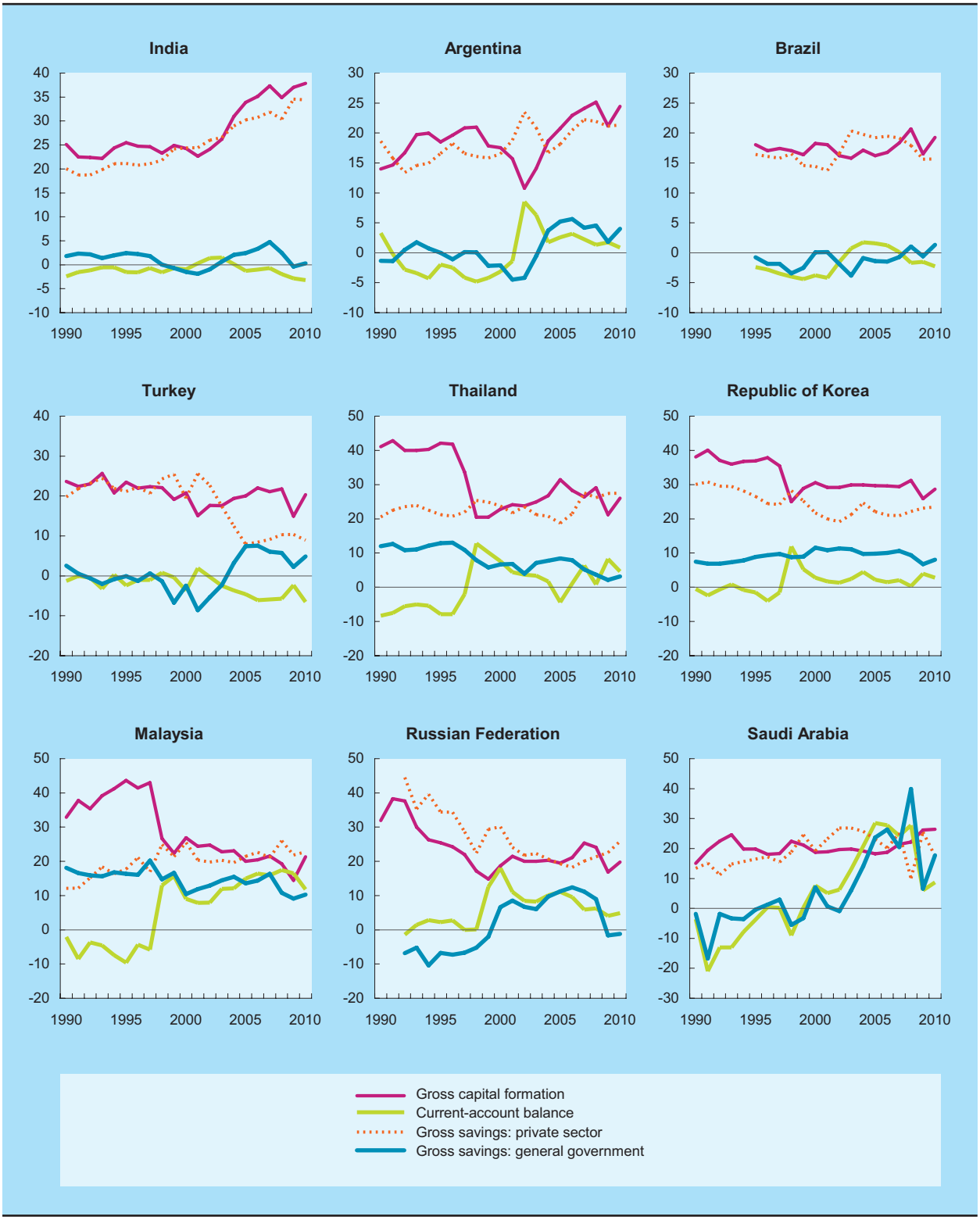


Chart 2.1 (concluded)

GROSS CAPITAL FORMATION, CURRENT-ACCOUNT BALANCE AND NATIONAL SAVINGS IN SELECTED COUNTRIES, 1990–2010

(Per cent of current GDP)



Source: UNCTAD secretariat calculations, based on *EC-AMECO* database; IMF, *World Economic Outlook* database; and national sources.

from a deficit to a large surplus in its external account coincided with a reduction in the government savings rate, while that of households remained stable. The large trade surpluses of these two economies are therefore not the result of *ex ante* household or government savings, but of the strategic specialization and the competitiveness of their economies. These have further increased in recent years through a combination of productivity gains and wage restraint, and are consistent with the *ex post* increase in corporate profits, which in turn have led to rising corporate savings.

Starting in 2005, the German Government embarked on fiscal adjustment and managed to generate positive savings. Since neither the Government nor the corporate sector had net financing needs, German banks increased their lending abroad, in particular to borrowers in other European countries that were facing competitiveness problems. This caused current-account deficits in many of these countries to widen and, as a counterpart, Germany's trade surplus to grow (Koo, 2010).

Even in European countries that currently have a sizeable public debt – requiring massive financial assistance to avoid default in some of them – external imbalances have been largely unrelated to government savings. In Hungary, Italy and Portugal, for example, the current-account balance deteriorated between 1995 and 2007–2008, while government savings remained fairly stable, averaging between 0 and -1 per cent of GDP. During the same period, current-account deficits widened dramatically in Bulgaria, Estonia, Latvia, Lithuania, Romania and Spain, their ratio to GDP reaching two-digit levels. However, government savings were positive in all these countries, and followed a rising trend in most of them. Only in Greece did the current-account balance and government savings deteriorate simultaneously after 2000; but, even there, the external deficit could not have been caused by government dissavings alone. What all these above-mentioned countries have in common is a loss of competitiveness during most of the 2000s. This was partly due to capital inflows that were attracted by interest rates differentials, combined with a perception that these countries presented a low exchange-rate risk (in some cases because of their membership of the Eurosystem) and that their equity and real estate markets offered opportunities for making rapid profits. These capital inflows fuelled speculative bubbles and led to real currency appreciation in the host countries. Since the nominal exchange rate as an instrument of monetary management does not exist within the eurozone, real exchange rates drifted apart, driven by differences in country-specific rates of inflation and unit labour costs (ULCs): between 2000 and 2006–2007, ULCs increased between 5 and 15 per cent in Greece, Ireland, Italy and Portugal, while in Germany, the largest economy of the eurozone and the main trading partner of most of the other members, they fell by 13 per cent (European Commission, 2011).

Few countries ran large fiscal deficits before the crisis …

In addition, easy access to credit – linked to financial deregulation and capital inflows – led to a fall in household savings. In Bulgaria, Greece, Romania and the Baltic States those savings even turned negative. As a result of their real currency appreciation, higher domestic demand led to widening current-account deficits. The impact of this unbalanced growth on corporate and government savings has been ambiguous: on the one hand, economic growth increased the revenues and savings of some governments and firms; on the other hand, easy access to credit may have weakened fiscal discipline (for instance, in Greece), and the loss of competitiveness affected corporate profits and savings. This was probably the case in Italy, Portugal and Spain, where corporate savings declined.

Summing up, external imbalances in the countries reviewed above were not caused by government dissavings, firstly, because in several countries government savings were positive before the crisis, and secondly, because government (and corporate) savings behaved basically as endogenous variables. The main factors contributing to their current-account deterioration were the loss of international competitiveness of their domestic firms and the decline in household savings, both of which were linked to massive capital inflows and financial deregulation that spurred credit-financed household expenditure and led to real appreciation of their currencies.

These experiences replicate, to a large extent, those of many Latin American and Asian countries

that suffered from financial crises between 1982 and 2002. In all these countries, changes in the real exchange rate were a major factor contributing to the crises and also to recovery. In Argentina, Brazil, Chile, Mexico and Uruguay, anti-inflation policies relied on exchange-rate anchors, which eventually led to real currency appreciation and a loss of competitiveness, and consequently to lower corporate profits and output growth. As long as capital inflows were attracted by interest rate differentials and benefited from implicit insurance against exchange-rate risk, these countries could finance their resulting current-account deficits. Capital inflows were not used primarily to increase fixed investment, but rather to finance private consumption and public debt service. Foreign savings thus caused a fall in domestic savings of both households and firms (as a result of lower profits). Government savings also tended to decline – even turning negative in Argentina and Brazil – due to slower growth which lowered fiscal revenues, and to the increasing cost of public debt, as monetary authorities tried to preserve their currency pegs by raising domestic interest rates.

The situation changed dramatically with the steep currency devaluations in Mexico in 1994–1995, in Brazil in 1999 and in Argentina in 2002. In Argentina, the current account swung from a deficit to a huge surplus in a single year, due partly to devaluation and partly to severe economic contraction (chart 2.1). The growth of private savings in 2002 was particularly surprising, since almost all conceivable factors for discouraging such savings were in place: freezing of bank deposits, debt default, negative real interest rates and deep depression. Despite these conditions, corporate profits in the tradables sector increased very rapidly, and, as a consequence, so did corporate savings in response to the new relative price structure. In the subsequent recovery of the real economy to very high growth rates, households and the Government generated significant savings from higher revenues and the investment rate more than doubled, with financing from domestic resources. Mexico also rapidly reduced its current-account deficit, although it did not turn this into surplus, and corporate savings also increased as a result of currency devaluation. In subsequent years, private savings of both households and the corporate sector remained high.

> … such deficits were the consequence rather than the cause of the crisis.

In Brazil, the current-account balance improved after the crisis and devaluation of 1999, but moved back into deficit during the last phase of the 2003–2008 period of boom, when high interest rates and consequent capital inflows led to renewed currency appreciation (chart 2.1). Similarly, but at less spectacular rates, the expansion of output and investment created the conditions for higher private and public savings. However, improvement in the fiscal accounts was limited by the high level of interest payments on the public debt. Indeed, although the Government generated a sizeable primary surplus of close to 3 per cent of GDP between 2005 and 2010, it still ran an overall deficit (e.g. including net interest payments) of a similar magnitude. The fiscal deficit in Brazil is clearly the consequence of high interest rates, and not its cause as suggested by some authors (e.g. Bacha, 2011; Lara Resende, 2011).

Among the Asian countries, China and India witnessed a strong increase in investment rates and national savings in the 2000s. In China, government savings have accounted for about 9 per cent of GDP in recent years, while private savings grew to more than 44 per cent of GDP in 2006–2010 – by far the highest private savings rate among the G-20 countries. Until 2007, the current-account surplus grew significantly, but again it would be a mistake to conclude that these savings have been the cause of China's large current-account surplus. That surplus is more likely to have been the result of an endogenous process whereby fast income growth, fuelled by massive investment and exports, boosted government and private savings.

Distinct from China, India has maintained its current-account balance at close to equilibrium over the past two decades. It has even registered a small deficit close to 2 per cent since 2008. Here, the large increase in the investment rate was the counterpart of higher domestic savings. Hence, India's external imbalances were not caused by domestic dissavings, and, as they were rather small, they did not have major global repercussions.

The performance of several South-East Asian countries differs from these two largest Asian developing countries. In most countries of this region, such as Indonesia, Malaysia, the Philippines, the Republic

of Korea and Thailand, the 1997–1998 crisis marked a clear break in their investment pattern. In some of them, the sharp adjustment of current-account balances during the Asian crisis coincided with falling investments (chart 2.1). Even after that crisis, investment rates never returned to their pre-crisis levels. The evolution of government savings prior to that crisis had little to do with its eruption. More recently, between 2008 and 2009, the increased government spending sought to compensate for lower private demand, which increased private savings.

In major oil- and mineral-exporting countries, external and public budget balances are heavily dependent on export revenues. Therefore both variables tend to closely follow the evolution of export prices: high prices lead simultaneously to fiscal and current-account surpluses – or "negative foreign savings" – and vice versa. As a result, in countries such as Algeria, Azerbaijan, Bolivia, Gabon, Kuwait, the Russian Federation and Saudi Arabia, there is a strong negative correlation between government savings and foreign savings. Since private savings are positively influenced by economic activity, which normally accelerates when prices are high and current accounts are in surplus, those savings also tend to be negatively correlated with foreign savings. However, this trade-off between domestic and foreign savings does not indicate any causality between them; for instance, current-account surpluses in recent years have not resulted from residents' decisions to save more.

These examples suggest that both public and private savings are largely endogenous variables that are determined by a number of domestic and external factors. The most important factor is the international competitiveness of domestic producers, which derives from productivity and relative prices. It determines to a large extent the current-account balance, or in other words, "foreign savings". While a relationship necessarily exists between national savings, foreign savings and investment – the elements of a national accounting identity – causality may run in different directions. In most of the countries reviewed, current-account imbalances were not the result of changes in government savings. Either the causality ran in the opposite direction, or other factors (i.e. international competitiveness and/or commodity prices) determined both current accounts and fiscal imbalances. In many of these countries, the main counterpart of external deficits was shrinking household savings, associated with an expansion of credit and the formation of speculative bubbles.

When the crisis erupted, new credit dried up in most developed economies, and households were compelled to adjust their expenditure to pay off debt. From 2007 to 2009, private savings increased by between 2 and 3.5 percentage points of GDP in Japan, Portugal, the United Kingdom, and the United States, and between 5 and 10 percentage points in the Baltic States, Ireland and Spain (chart 2.1). Government savings declined sharply in these countries, due partly to the effects of automatic stabilizers and partly to discretionary increases in public expenditure as governments sought to compensate for lower private demand. Fiscal balances moved substantially into the red, but this was a consequence rather than a cause of the crisis.

2. The evolution of fiscal accounts and the impact of the crisis

While the previous section looked at the record of fiscal balances and their possible linkages with domestic and global imbalances, this section examines the recent evolution of fiscal revenues and expenditure and how they affected countries' room for manoeuvre in their policy response to the crisis. It also discusses the impact of the crisis on fiscal accounts, as a result of "automatic" changes in revenues and expenditures, and how countries responded by means of proactive policy measures such as stimulus packages.

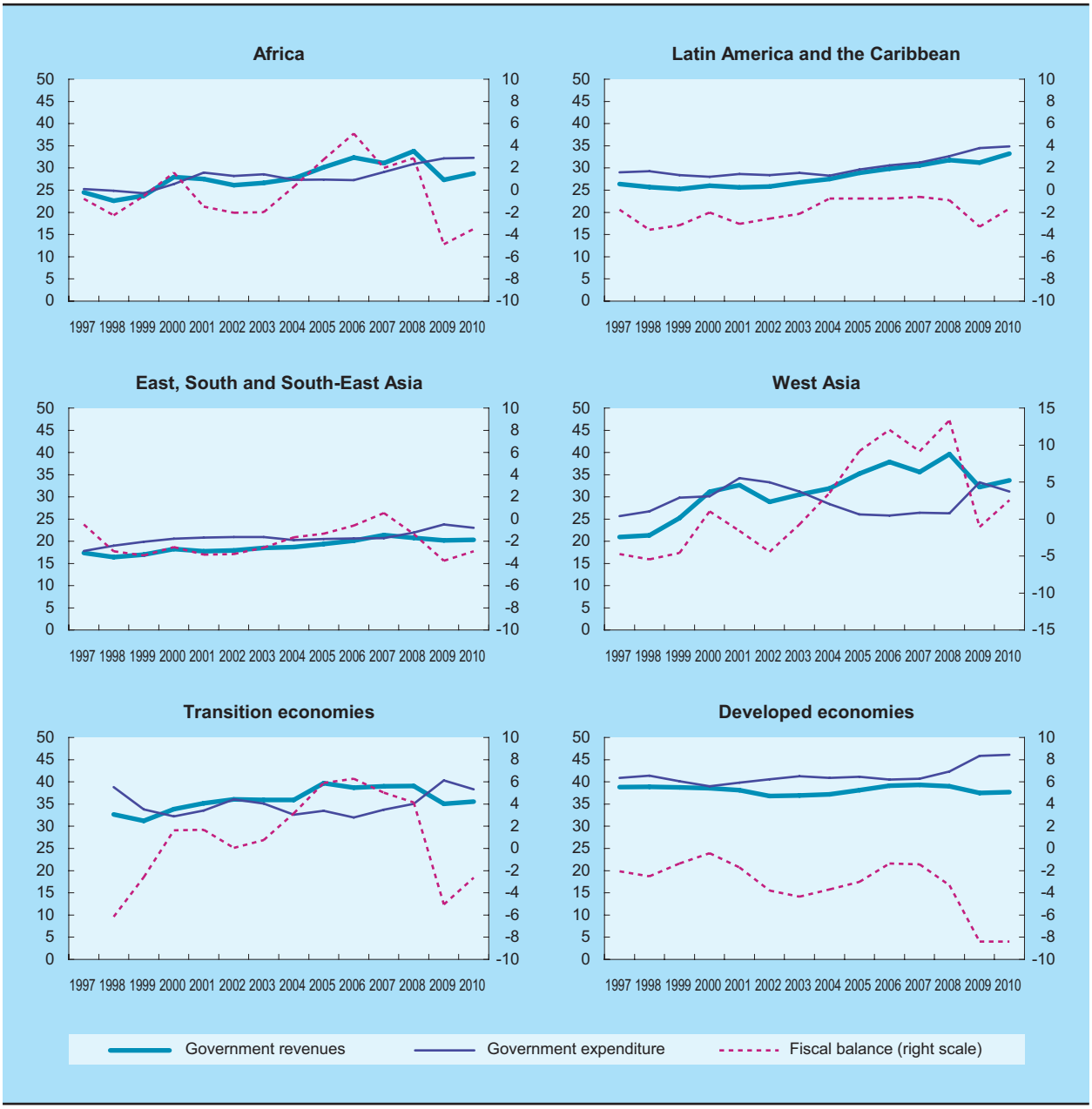
Between 2002 and 2007–2008, fiscal balances improved significantly in many countries, although some governments continued to run relatively large deficits. On the eve of the crisis, fiscal accounts were balanced, on average, in East, South and South-East Asia, and Latin America; and in Africa, the transition economies and West Asia, governments were achieving sizeable surpluses. In developed economies, fiscal deficits had fallen, on average to less than 1.5 per cent of GDP. However, the crisis caused fiscal accounts to turn into deficit in all the regions (chart 2.2).

In general, the improvement of fiscal balances in the years preceding the crisis did not result from fiscal retrenchment and expenditure cuts; in most countries, government revenues and expenditures

Chart 2.2

GOVERNMENT REVENUES AND EXPENDITURE AND FISCAL BALANCE IN SELECTED REGIONS, 1997–2010

(Per cent of current GDP, weighted average)



Source: UNCTAD secretariat calculations, based on the *EC-AMECO* database; OECD, *Economic Outlook* database; ECLAC, *CEPALSTAT*; IMF, *World Economic Outlook* database; and national sources.

Note: ***Africa*** excludes: Botswana, Burkina Faso, Cape Verde, Central African Republic, Equatorial Guinea, Lesotho, Liberia, Madagascar, Mauritania, Mayotte, Saint Helena, Seychelles, Somalia, Western Sahara and Zimbabwe. ***West Asia*** excludes: Iraq, Occupied Palestinian Territory and Yemen. ***East, South and South-East Asia*** comprises: China, China, Hong Kong SAR, India, Indonesia, the Islamic Republic of Iran, the Republic of Korea, Malaysia, Nepal, the Philippines, Singapore, Sri Lanka, Taiwan Province of China, Thailand and Viet Nam. (Data for China refer to budget revenue and expenditure, they do not include extra-budgetary funds or social security funds.) ***Transition economies*** exclude: Croatia and Montenegro, but include Mongolia. ***Latin America*** comprises: Argentina, Bolivia, Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Nicaragua, Peru and Uruguay. ***Developed economies*** comprise: Austria, Belgium, Bulgaria, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Table 2.1

EVOLUTION OF FISCAL INDICATORS, SELECTED REGIONS, 1997–2010

(Per cent of current GDP)[a]

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Developed economies														
Total revenue and grants	38.8	38.9	38.8	38.5	38.1	36.8	36.9	37.2	38.1	39.1	39.3	39.0	37.5	37.7
Current revenue	37.6	37.8	37.7	37.4	36.9	35.6	35.7	35.9	36.9	37.8	38.1	37.7	36.1	36.6
Tax revenues	33.4	33.6	33.5	33.2	32.7	31.4	31.6	31.8	32.6	33.4	33.6	33.1	31.2	31.5
Non-tax revenues[b]	5.4	5.3	5.3	5.3	5.4	5.4	5.3	5.5	5.5	5.8	5.7	6.0	6.3	6.2
Total expenditure	40.9	41.4	40.1	39.0	39.8	40.6	41.3	40.9	41.1	40.5	40.7	42.3	45.9	46.1
Current expenditure	36.4	36.1	35.6	34.8	35.3	36.1	36.9	36.7	36.7	36.5	36.7	37.9	40.9	41.1
Interest payments	4.4	4.2	3.8	3.6	3.4	3.1	2.8	2.7	2.7	2.7	2.8	2.7	2.6	2.7
Capital expenditure	4.4	5.3	4.5	4.2	4.5	4.4	4.4	4.2	4.4	4.0	4.1	4.5	5.0	5.0
Primary balance	2.3	1.7	2.4	3.2	1.7	-0.7	-1.5	-1.0	-0.3	1.3	1.3	-0.6	-5.8	-5.7
Overall balance	-2.1	-2.5	-1.3	-0.4	-1.7	-3.8	-4.3	-3.7	-3.0	-1.4	-1.4	-3.3	-8.4	-8.4
Africa														
Total revenue and grants	24.5	22.6	23.8	28.0	27.5	26.1	26.6	27.7	30.1	32.4	31.1	33.8	27.3	28.8
Tax revenues	17.6	16.6	18.1	19.5	18.9	17.2	17.8	18.3	19.6	19.9	19.8	21.0	19.0	19.0
Non-tax revenues[b]	6.9	6.0	5.6	8.5	8.6	9.0	8.8	9.3	10.6	12.4	11.3	12.8	8.3	9.8
Total expenditure	25.3	24.9	24.3	26.4	29.0	28.2	28.6	27.3	27.4	27.2	29.1	30.9	32.2	32.3
Current expenditure	19.5	19.3	18.8	21.4	22.9	22.3	23.2	21.9	21.7	21.0	21.6	22.5	24.0	24.6
Interest payments	3.0	3.0	3.0	3.8	3.6	3.3	3.5	2.8	2.6	2.2	2.1	1.8	1.9	2.1
Capital expenditure	5.7	5.5	5.4	4.9	6.0	5.5	5.0	5.2	5.6	6.1	7.2	8.2	8.1	7.6
Primary balance	2.1	0.4	2.2	5.3	1.9	1.1	1.3	2.9	5.3	7.2	3.7	4.4	-3.3	-1.7
Overall balance	-0.8	-2.3	-0.5	1.6	-1.5	-2.0	-2.0	0.3	2.8	5.1	2.0	2.9	-4.9	-3.5
Latin America														
Total revenue and grants	26.4	25.7	25.2	26.0	25.6	25.8	26.8	27.5	28.9	29.8	30.6	31.8	31.2	33.2
Tax revenues	18.8	19.1	18.4	18.2	18.1	18.0	18.4	18.9	20.0	20.6	21.3	21.7	21.9	23.5
Non-tax revenues[b]	7.2	6.4	6.7	7.8	7.5	7.8	8.3	8.6	8.8	9.2	9.1	10.0	9.2	9.7
Total expenditure	29.0	29.3	28.4	28.0	28.6	28.4	28.9	28.2	29.6	30.6	31.2	32.7	34.5	34.9
Current expenditure	26.5	25.8	25.3	25.1	25.5	25.0	25.9	24.9	26.2	27.0	27.4	28.5	29.9	29.8
Interest payments	3.2	4.1	4.4	3.9	4.0	4.0	4.6	3.8	4.0	3.7	3.4	3.4	3.4	2.7
Capital expenditure	2.5	3.4	3.1	2.9	3.1	3.3	3.0	3.3	3.4	3.6	3.8	4.2	4.6	5.0
Primary balance	1.3	0.5	1.3	1.9	1.0	1.4	2.4	3.0	3.2	3.0	2.9	2.5	0.1	1.1
Overall balance	-1.8	-3.6	-3.2	-2.0	-3.0	-2.6	-2.1	-0.8	-0.8	-0.8	-0.6	-0.9	-3.3	-1.7
East, South and South-East Asia														
Total revenue and grants	17.3	16.4	17.0	18.2	17.8	17.9	18.5	18.7	19.4	20.1	21.4	20.7	20.2	20.3
Tax revenues	13.0	12.6	12.9	13.7	13.6	13.8	14.1	14.4	14.9	15.4	16.3	16.3	16.0	16.5
Non-tax revenues[b]	4.4	3.8	4.1	4.6	4.2	4.1	4.4	4.3	4.5	4.8	5.1	4.4	4.2	3.8
Total expenditure	17.8	19.0	19.9	20.6	20.8	20.9	21.0	20.3	20.5	20.6	20.7	21.9	23.8	23.0
Current expenditure	13.3	14.5	15.3	16.2	16.5	16.6	16.4	16.1	16.3	16.3	16.3	17.4	18.9	18.3
Interest payments	1.9	2.1	2.4	2.3	2.4	2.3	2.2	2.0	1.8	1.8	1.7	1.6	1.5	1.4
Capital expenditure	4.6	4.7	4.8	4.4	4.4	4.4	4.5	4.2	4.3	4.4	4.4	4.6	5.0	4.8
Primary balance	1.4	-0.4	-0.5	0.0	-0.7	-0.7	-0.3	0.3	0.7	1.3	2.3	0.4	-2.1	-1.2
Overall balance	-0.5	-2.6	-2.9	-2.3	-3.1	-3.0	-2.5	-1.6	-1.1	-0.5	0.7	-1.2	-3.6	-2.7
West Asia														
Total revenue and grants	20.9	21.3	25.2	31.2	32.6	28.9	30.5	31.9	35.2	37.9	35.6	39.6	32.2	33.7
Tax revenues	10.6	11.6	7.9	7.2	7.4	8.0	8.9	8.4	8.2	8.7	9.1	8.6	9.3	9.5
Non-tax revenues[b]	10.3	9.7	17.4	23.9	25.2	20.9	21.6	23.5	27.0	29.2	26.5	31.0	22.9	24.2
Total expenditure	25.7	26.8	29.8	30.1	34.2	33.3	31.2	28.3	26.0	25.8	26.4	26.3	33.3	31.2
Current expenditure	22.8	24.3	27.0	27.3	30.6	29.5	27.7	25.2	22.6	22.1	21.8	21.8	27.0	25.1
Interest payments	5.4	7.7	6.3	7.0	7.8	7.1	6.5	5.2	3.7	3.2	3.0	2.5	2.8	2.3
Capital expenditure	2.8	2.5	2.8	2.8	3.6	3.7	3.5	3.1	3.4	3.6	4.6	4.4	6.3	6.0
Primary balance	0.7	2.3	1.7	8.0	6.2	2.6	5.8	8.7	12.9	15.3	12.1	15.9	1.7	4.8
Overall balance	-4.7	-5.4	-4.6	1.0	-1.6	-4.4	-0.7	3.5	9.2	12.1	9.2	13.3	-1.1	2.5
Transition economies														
Total revenue and grants						36.1	35.9	35.9	39.7	38.7	39.0	39.1	35.0	35.6
Tax revenues						25.1	24.7	25.2	29.8	29.3	29.7	29.4	24.6	26.2
Non-tax revenues[b]						10.9	11.2	10.7	9.9	9.4	9.3	9.7	10.4	9.4
Total expenditure						36.1	35.1	32.6	33.5	32.0	33.7	35.1	40.3	38.3
Current expenditure						28.0	28.5	25.6	28.7	25.9	27.9	28.8	34.1	32.1
Interest payments						1.9	1.5	1.1	0.9	0.7	0.6	0.5	0.7	0.7
Capital expenditure						8.1	6.7	7.1	4.8	6.1	5.9	6.3	6.3	6.2
Primary balance						1.9	2.3	4.4	7.1	7.4	5.8	4.5	-4.7	-2.1
Overall balance						0.0	0.8	3.3	6.3	6.7	5.3	4.0	-5.3	-2.7

Source: UNCTAD secretariat calculations, based on *EC-AMECO* database; OECD, *Economic Outlook* database; ECLAC, *CEPALSTAT*; IMF, *World Economic Outlook* database; and national sources.

Note: For the composition of country groups, see chart 2.2.

a Corresponds to general government except for Argentina, Bolivia, the Bolivarian Republic of Venezuela, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Nicaragua and Uruguay, for which indicators refer to the non-financial public sector.

b Includes capital revenues.

increased together, although at different rates. With the exception of developed countries, where they remained flat as a percentage of GDP, government revenues expanded significantly in all regions from 2002–2003 onwards. This was supported by broad-based acceleration of growth and increased earnings from commodity exports. The latter resulted not only from higher prices, but also from changes in the distribution of natural resource rents, with a larger share going to the governments in several of the producing countries. In Africa, the transition economies, East, South and South-East Asia and Latin America, expenditure ratios also increased, in many cases from relatively low levels (table 2.1).

Many developing economies had improved their fiscal balances before the crisis, with higher public revenues and expenditure, which enlarged their policy space.

West Asian countries seem to have followed a different pattern. Between 2001 and 2008, government expenditure as a percentage of GDP fell significantly, especially in Kuwait, Saudi Arabia, Turkey and the United Arab Emirates. However, this does not indicate a reduction of government expenditure in absolute terms; the expenditure ratio decreased mainly because GDP at current prices rose very rapidly in the major oil-exporting countries due to higher oil prices. In addition, lower interest payments on public debt accounted for a large share of the fall in government expenditure: in Turkey, they fell from 22.4 per cent of GDP in 2001 to 4.4 per cent in 2010, owing to a significant decline in public debt ratios and an even more impressive decline in domestic interest rates. The reduction in interest payments was also significant in Jordan, Kuwait, Lebanon, Qatar and Saudi Arabia (where they fell from almost 8 per cent of GDP in the early 2000s to only 2.3 per cent in 2010).

In 2008 and 2009, government expenditure soared in all regions, while government revenues declined, especially in developed economies and commodity exporters.

The declining share of interest payments in public expenditure has been a widespread trend (table 2.1). It resulted from the reduction of public debt ratios in most developing and emerging economies (as discussed further in the next section), as well as from lower real interest rates in most countries. In Africa, Latin America and East, South and South-East Asia, interest payments fell by 1 to 2 percentage points between the periods 1998–2000 and 2008–2010. In the transition economies there was a similar reduction between 2002 and 2008–2010. In all these regions, the decline in interest payments was even greater in relation to fiscal revenues. During the same period, the share of fiscal revenues that had to be used for interest payments fell from 14 to 7 per cent in Africa, from 16 to 8 per cent in Latin America, from 16 to 12 per cent in East and South Asia, and from 25 to 7 per cent in West Asia. This meant that a significant proportion of fiscal resources could be redirected from debt servicing to more productive uses. Indeed, social transfers and capital expenditure increased significantly in developing regions. Capital expenditure alone gained between 2 and 3 percentage points of GDP between 2000 and 2010 (table 2.1). Hence, not only did the size of public sector finances increase (measured either as the share of government revenue or expenditure in GDP), but also its support for capital formation and improvements in income distribution grew.

Such expansionary adjustments of fiscal balances, with higher revenues and primary expenditure, implied a structural change in many developing and transition economies, and served to enlarge their policy space which they were able to use when hit by the financial crisis. Almost from the onset of the crisis there was wide consensus in the major economies that fiscal measures were necessary for pulling the economies out of recession. In 2008 and 2009, government expenditure as a share of GDP soared in all the regions, while government revenues declined, but in varying degrees: steeply in the regions that rely heavily on primary commodity exports (i.e. Africa, the transition economies and West Asia), significantly but less sharply in developed economies, and very moderately in East, South and South-East Asia and Latin America.

In developed countries with well-established social security systems and a comparatively high share of direct taxes in fiscal revenues, changes in

government revenues and expenditure are partly related to automatic stabilizers. Between 2007 and 2010, spending on social security benefits increased by 3 per cent of GDP in Japan and the United States, and by between 1.5 and 4.3 per cent of GDP in most European countries, with the highest increases in those countries where unemployment rose the most, such as Greece and Spain. On the revenue side, the loss of receipts from income, profits and capital gains taxes was particularly severe in the United States: almost 4 per cent of GDP between 2007 and 2009. But not all supplementary social benefits and lower tax revenues were "automatically" triggered by the recession and higher unemployment; in several countries, they were also part of discretionary fiscal stimulus packages, including tax cuts and increased spending, as part of governments' efforts to stimulate domestic demand and counteract the effects of the global economic crisis.

In addition, the monetary authorities lowered interest rates and provided the liquidity necessary to avoid financial collapse. But such policies could not revive credit and restore global demand, as a massive private deleveraging process was under way. Fiscal stimulus was therefore even more critical to counterbalance the shrinking demand of the private sector.

3. Fiscal responses to the crisis

The fiscal responses to the crisis in the major economies varied considerably across regions and countries, not only in terms of the size of their economic stimulus, but also in terms of its composition and timing. A detailed assessment of fiscal stimulus packages is not straightforward, because it is difficult to distinguish policy measures that were adopted in response to the crisis from others that were already planned or that would have been implemented in any case (e.g. public investments for reconstruction following natural disasters). In addition, official announcements are not always executed at the expected time, and they only provide a general idea of the size and composition of the packages. Among developed countries, the United States implemented the largest stimulus package, in both nominal terms and as a percentage of GDP, followed by Japan and Germany (table 2.2). A relatively large share of the announced fiscal stimulus took the form of tax cuts (about 40 per cent) in developed countries, compared with only 5 per cent in the developing and transition economies listed in table 2.2. However, in a number of developed countries that announced multiple waves of stimulus packages, the spending component increased compared with tax cuts in the subsequent announcements (Prasad and Sorkin, 2009).

In several developing and transition economies, the relative size of the stimulus packages as a share of GDP actually exceeded that of developed economies. For instance, China and the Republic of Korea announced packages equivalent to 13 and 10 per cent of their respective GDP. In China, three major fiscal packages were announced between November 2008 and March 2009, totalling almost $570 billion. All these resources were allocated to increased spending, 74 per cent of which was capital expenditure, in particular for post-earthquake reconstruction projects and investment in infrastructure. The Government of the Republic of Korea made four major announcements of stimulus between November 2008 and March 2009, involving the equivalent of $95 billion, of which 97 per cent was in the form of increased expenditure. Thereafter, in August 2009 the Government announced a fifth package which consisted exclusively of tax incentives and deductions, but there is no estimation of the cost of this additional component. In Indonesia, the Government announced a fiscal programme that was relatively small in comparison, and mainly comprised tax incentives and deductions. Nevertheless, overall stimulus packages in developing Asia, including Bangladesh, India, Malaysia, the Philippines, Singapore and Thailand emphasized higher spending, particularly for infrastructure investment (Hur et al., 2010).

In Latin America, at the end of 2008 the major economies launched a set of measures to counter the effects of the economic and financial crisis. Argentina announced the largest stimulus package as a percentage of GDP, followed by Brazil, Chile and Mexico. The composition of these packages reflected the view that increased spending, rather than tax cuts, was the most appropriate tool to stimulate domestic demand under the prevailing circumstances. Increased spending provides a direct means of boosting demand, whereas tax cuts increase the private sector's disposable income, a large proportion of which, in a context of uncertainty, is likely to be saved rather than spent. In some countries, the increased expenditure was partly covered by fiscal revenue

Table 2.2

FISCAL STIMULUS PACKAGES, AS ANNOUNCED IN SELECTED ECONOMIES, 2008–2010

(Billions of dollars and percentages)

	Total amount ($ billion)	GDP (Per cent)	Tax cut share	Spending share
Developed economies				
Australia	23	2.4	45.2	54.8
Canada	24	1.8	52.4	47.6
France	21	0.8	6.5	93.5
Germany	47	1.4	68.0	32.0
Italy	6	0.3	33.3	66.7
Japan	117	2.3	30.0	70.0
Spain	35	2.4	58.4	41.6
United Kingdom	35	1.5	56.0	44.0
United States[a]	821	5.7	36.5	63.5
Total	1129	3.3	38.3	61.7
Unweighted average		*2.1*	*42.9*	*57.1*
Developing and transition economies				
Argentina	17	6.0	8.5	91.5
Brazil	45	3.6	15.0	85.0
China	568	13.1	0.0	100.0
Chile	4	2.8	46.0	54.0
India	43	3.4	0.0	100.0
Indonesia	8	1.5	76.9	23.1
Mexico	21	2.4	0.0	100.0
Republic of Korea	95	10.2	2.9	97.1
Russian Federation	80	6.4	31.3	68.7
Saudi Arabia	50	9.4	0.0	100.0
South Africa	8	2.6	0.0	100.0
Total	937	8.0	4.7	95.3
Unweighted average		*5.6*	*16.4*	*83.6*

Source: UNCTAD secretariat calculations, based on European Commission, 2009; ECLAC, 2009; CBO, 2011; OECD, 2009; Hur et al., 2010; Ponomarenko and Vlasov, 2010; Prasad and Sorkin, 2009; and United States Government, 2011.

a The amount reported for the United States refers only to the stimulus package provided under the American Recovery and Reinvestment Act (ARRA) of 2009; it excludes the cost of industry bailouts and capital infusions that were components of the Troubled Asset Relief Program (TARP).

from new sources. For instance, in Argentina this was achieved through social security reform (reverting from a private-dominated capitalization regime to a pay-as-you go public system), whereas in Brazil, higher capital expenditure was financed by selling oil exploration rights.

Governments of many natural-resource-rich countries where public finances had a strongly pro-cyclical bias in the past were generally able to adopt proactive countercyclical policies despite the fall in commodity prices (World Bank, 2009). During the commodity boom in the 2000s, when several of these countries adopted fairly prudent fiscal policies, the resulting reserves they managed to accumulate served them well when the crisis erupted, by enabling them to increase their spending to moderate its impacts. At the same time, many countries were able to significantly reduce their public debt.

In Latin America, in 2009 Chile used the reserves that the Government had accumulated in its stabilization fund during the years of high copper prices to counter the impact of the crisis (Villafuerte, López-Murphy and Ossowski, 2010; Torre, Sinnott and Nash, 2010). Many oil-producing countries in North Africa and West Asia, as well as in the Commonwealth of Independent States, were also able to implement fiscal stimulus packages (Abdih et al., 2010). In countries such as Kazakhstan and

the Russian Federation, where the domestic financial sector was strongly affected by the global financial and economic crisis, a significant proportion of fiscal expenditure was targeted at rescuing that sector (Heuty and Aristi, 2010). A number of governments in sub-Saharan Africa also followed an expansionary stance as a response to the crisis, based on public revenue perceived from their extractive industries (Kasekende, Brixiová and Ndikumana, 2010; Osakwe, 2011; Brixiová, Ndikumana and Abderrahim, 2010).

In a context of rising commodity prices, many of these resource-rich countries recovered rapidly from the crisis, and currently present a better fiscal situation and much lower ratios of public debt to GDP than in the early 2000s. Given that commodity prices in general have rebounded since mid-2009, and have continued to grow strongly, it is difficult to assess whether economic growth in the natural-resource-rich countries in 2010 and 2011 has been due to their fiscal stimulus policies or whether it is a consequence of the rising commodity prices. However, there are indications that in many of these countries GDP growth started to recover when commodity prices were still in a trough, mainly in the first quarter of 2009. This would suggest that the fiscal stimulus succeeded in expanding their economies. Moreover, these countries probably would have been in a much worse situation had the fiscal stimulus not been implemented. In any case, although economic recovery in these countries may imply that the extraordinary fiscal stimulus can be discontinued, they may need to maintain higher levels of expenditure than before the crisis for developmental purposes. Infrastructure investment and social transfers, for example, are fundamental elements of a long-term development strategy. As long as government revenues are healthy as a result of economic growth and high commodity prices, a reduction in these expenditures would not be justified.

Financial crises – such as those that struck many emerging-market economies in the past – typically create fiscal costs through interest rate hikes, currency devaluation that increases the burden of public debt denominated in foreign currencies, and public-funded bailouts. This is in addition to the direct effects of slower growth or recession on current revenues and expenditures, and on discretionary fiscal stimulus measures. In the context of the latest crisis, bail-out operations have been taking place mainly in developed economies. Developing countries were generally able to avoid this kind of fiscal cost, because most of them did not experience banking crises, and therefore did not need to bail out any of their banks. There were a few exceptions, such as Dubai and Trinidad and Tobago, where the governments provided support to investment companies. In addition, a relatively solid external payments position made it possible for most developing-country governments to manage the initial financial turbulence caused by short-term capital fleeing to "safe havens". They used international reserves and controlled currency depreciation, without resorting to monetary "overkill". Although the monetary authorities in several countries initially increased interest rates, they were able to return rapidly to a more accommodative monetary stance. As a result, public finances in developing and emerging market economies were not affected by rising interest rates on the domestic public debt.

Fiscal stimulus in developing countries consisted of an increase in public spending, while in developed countries it consisted largely of tax cuts.

In contrast, fiscal accounts in several developed countries were severely affected by the financial crisis. In these countries, the authorities gave top priority to preventing the collapse of the financial system, making available the financial resources necessary to achieve this objective. In 22 EU countries, "approved government aid"[3] to the financial sector between October 2008 and October 2010 exceeded €4.5 trillion, which represents 39 per cent of EU-27 GDP for 2009. The first 25 per cent of this aid was disbursed in 2008 and another equal amount in 2009. These "actually used amounts" are lower than the upper limits of support, since in some countries, such as Denmark and Ireland, a significant share of the approved aid consisted of large blanket-guarantee schemes which covered the entirety of their banks' debts. From the €4.5 trillion of total approved aid, €2.3 trillion was provided through special schemes or particular financial institutions in 2008 and 2009, of which 25 per cent (€237 billion in 2008 and €354 billion in 2009) was finally treated as an "aid element" by the Commission, since the total amount used cannot be treated as a benefit. However, to put them in perspective, the crisis-related aid measures to financial institutions in 2009 represented about

five times the overall amount of State aid granted to all other sectors (agriculture, fisheries, industry, other services and transport, excluding railways) in the EU-27. Of the €354 billion aid element in 2009, 40 per cent was used for recapitalization measures, 36 per cent for guarantees, 21 per cent for asset relief interventions, and the remaining 3 per cent was disbursed for liquidity measures other than guarantee schemes (European Commission, 2010a).

In the United States, the Troubled Asset Relief Program (TARP) allowed the United States Treasury to purchase – or insure – up to $700 billion worth of troubled assets, mainly from the financial sector, and to a lesser extent from the automotive industry. In Switzerland, the Government provided $5.6 billion in capital to the largest Swiss bank at the time, to recapitalize it and to help it cope with a liquidity shortage. In several countries, the actual fiscal loss represented only a small fraction of the total amount of resources made available to the financial sector.[4] In some rare instances the Government even made a profit. In other countries, the support programmes nullified all efforts that could be made for reducing the fiscal deficit: in Ireland, for example, capital transfers from the Government (basically its support to domestic banks) amounted to 20.8 per cent of GDP in 2010 (up from 3.3 per cent the year before), causing a revision of the deficit from 14.3 per cent of GDP to 32.4 per cent. Meanwhile, the Irish Government embarked on a drastic budgetary consolidation programme – weighted significantly in favour of spending cuts – which is forecast to reduce the GDP growth rate by 1.5 to 2 percentage points in 2011 (Government of Ireland, 2010).

Interest payments have remained stable in most developed countries, despite higher public-debt-to-GDP ratios, owing to their accommodative monetary policies that reduced interest rates to historic lows. Only in a handful of countries did the interest payments impose a significant burden on fiscal balances, due to a sudden and sharp increase in their debt ratios (Iceland) and/or a rise in the risk premium (Greece and Ireland). However, the accumulation of substantial public debt means that any normalization of monetary policies (i.e. increasing policy interest rates to pre-crisis levels) could entail significant fiscal costs.

C. The evolution of public debt

1. *Recent trends in public debt in developed and developing countries*

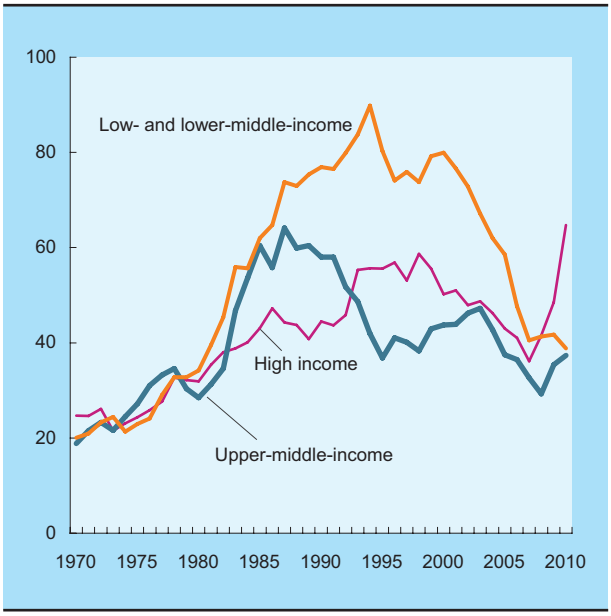
Over the past 40 years the median ratio of public debt to GDP has changed considerably in both developed and developing countries. Beginning at relatively low levels in 1970 – at 20 and 25 per cent of GDP in developing and developed countries, respectively – that ratio increased significantly until the mid-1990s. It exceeded 60 per cent of GDP in the upper-middle-income developing countries in the second half of the 1980s, when Latin America was strongly affected by a debt crisis, and by the mid-1990s it had reached a peak of 90 per cent of GDP in the low- and lower-middle-income developing countries (chart 2.3).[5] In developed countries, the median public-debt-to-GDP ratio reached nearly 60 per cent in 1998. At the turn of the new millennium that ratio declined rapidly in both developed and developing countries to a level between 30 and 40 per cent of GDP. However, the Great Recession reversed this trend and led to a sudden jump in the ratio in many developed countries, so that by the end of 2010 the median ratio in those economies was well above 60 per cent and had surpassed the previous peak of 1998.[6]

The low- and lower-middle-income countries did not experience a similar surge in the median public-debt-to-GDP ratio as a result of the crisis,

Chart 2.3

RATIO OF PUBLIC DEBT TO GDP IN DEVELOPING COUNTRIES, BY INCOME GROUP, 1970–2010

(Median, in per cent)



Source: UNCTAD secretariat calculations, based on World Bank, *Global Development Finance*; and national sources.
Note: The classification of income groups follows that of the World Bank.

and there was only a small increase in that ratio in the upper-middle-income countries. As a result, the median public-debt-to-GDP ratio in developed countries is now much higher than that of developing countries. However, there are substantial variations among the latter group of countries: in 23 countries the debt-to-GDP ratio in 2010 was at least 5 percentage points higher than in 2008, and 14 of these countries had a debt-to-GDP ratio in 2010 that was 10 percentage points higher than in 2007. The cross-country dispersion of the debt-to-GDP ratio of developing countries remains as high as it was in the 1990s (*TDR 2008*, chapter VI). Indeed, the World Bank still classifies about 40 per cent of the low-income countries as being either in debt distress or at risk of debt distress.

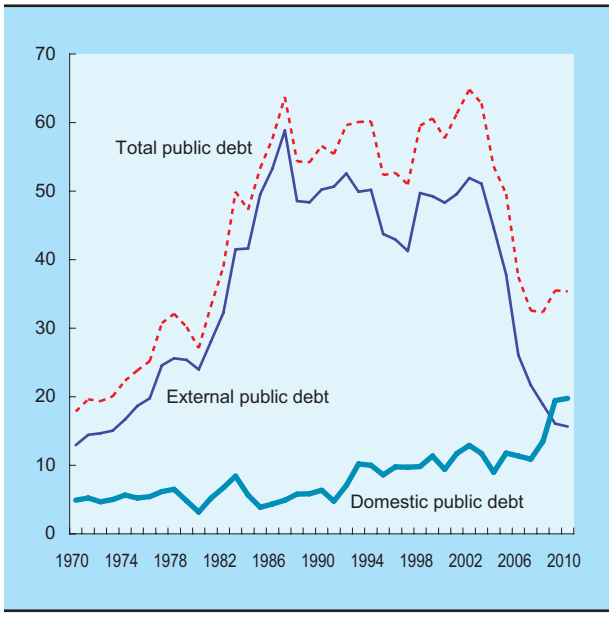
Not only did developing countries reduce their public-debt-to-GDP ratios, but they also altered the composition of their public debt, as their governments borrowed more domestically and less abroad. In 2002, when their median public-debt-to-GDP ratio peaked at 65 per cent of GDP, about 80 per cent of their total public debt was external and only 20 per cent was owed to residents. By 2010, the ratio had dropped to 35 per cent, and only 44 per cent of it was owed to non-residents (chart 2.4). Thus, the median public debt owed to non-residents in developing countries fell from approximately 50 per cent of GDP in 2002 to 15 per cent in 2010. In upper-middle-income countries the median public debt owed to non-residents had fallen to12 per cent of GDP and in low-income countries to 17 per cent. Indeed, it was this steep decline that explains the overall reduction in the public debt ratio in developing countries.

The dramatic reduction in the median external public-debt-to-GDP ratio in developing countries was due more to their relatively rapid GDP growth than to a reduction in the stock of their external debt. Between 1998 and 2009 their stock of external public debt remained more or less constant, at around

Chart 2.4

RATIO OF TOTAL, DOMESTIC AND EXTERNAL PUBLIC DEBT TO GDP IN DEVELOPING COUNTRIES, 1970–2010

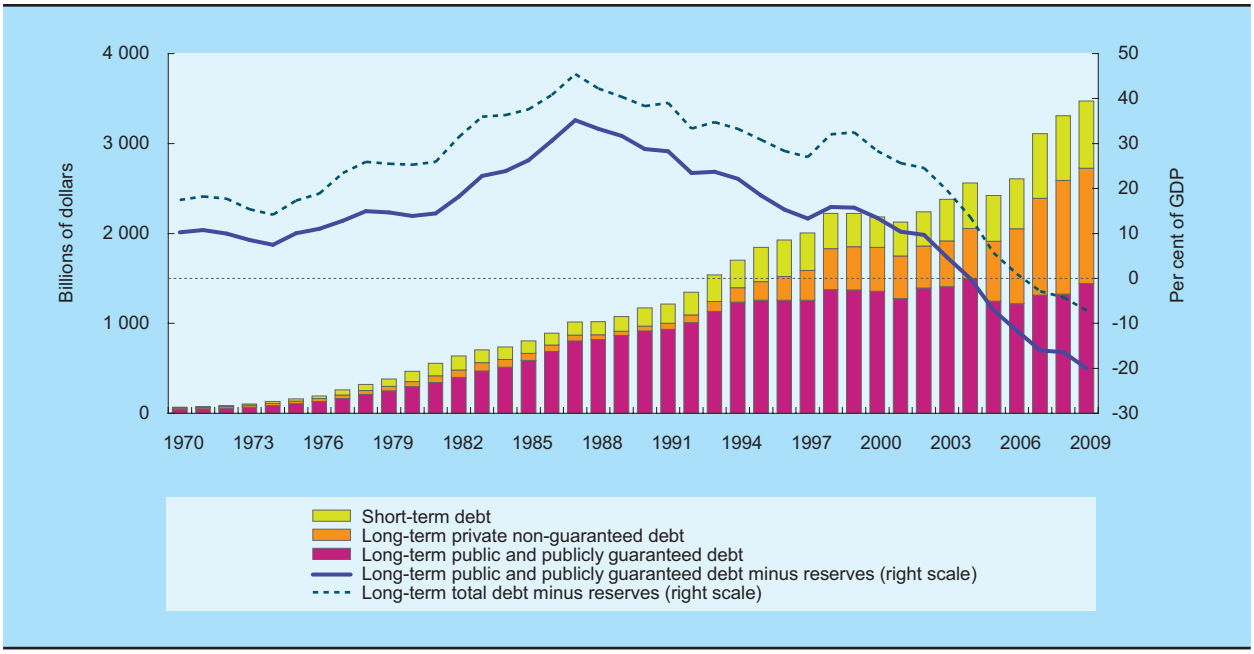
(Median, in per cent)



Source: UNCTAD secretariat calculations, based on World Bank, *Global Development Finance*; and national sources.

Chart 2.5

EXTERNAL DEBT IN DEVELOPING COUNTRIES, BY TYPE OF DEBT, 1970–2009



Source: UNCTAD secretariat calculations, based on World Bank, *Global Development Finance*; and national sources.

$1.4 trillion (chart 2.5). However, a debt management strategy in several countries geared towards reducing their reliance on foreign capital and increasing domestic borrowing also contributed to this trend.

The relative weight of a debt denominated in foreign currency also depends on the real exchange rate; for instance, a currency devaluation that is not followed by a similar increase in domestic prices (the GDP deflator) may suddenly increase the external debt ratio. This is what happened in many developing countries during the 1980s, and again between 1997 and 2002. Conversely, a real appreciation makes the GDP increase more rapidly in current dollars, so that the external debt ratio declines more rapidly. After the strong devaluations in the late 1990s and early 2000s, most developing countries' currencies underwent some real appreciation, which contributed to a reduction in their foreign debt ratios.

In the past decade, despite the crisis, the ratio of public debt to GDP in developing countries declined significantly.

It is worth pointing out that while the external public debt of developing countries remained more or less constant, corporate long-term external debt grew rapidly, almost tripling over the 1998–2009 period (from $450 billion to nearly $1.3 trillion). The same period also saw a net increase in short-term external debt, from $390 billion in 1998 to $750 billion in 2009 (chart 2.5). Even if the increases in short-term and corporate borrowing are factored in, the average external-debt-to-GDP ratio of developing countries as a group fell by nearly 20 percentage points over the period 1998–2009.

Although governments that subscribe to the Lawson Doctrine may ignore external financial fragility related to private debt, policymakers need to keep in check the behaviour of private borrowers, because the inability of the corporate sector to service its debts can lead to a currency and banking crisis, and ultimately to a fiscal crisis.

In addition to reducing their public debt ratios, developing countries as a group also accumulated large amounts of external assets in the form of foreign currency reserves. At the beginning of 2010, their total stock of such reserves was well over $4.5 trillion, up from approximately $500 billion in the mid-1990s. By 2005, these external assets had become larger than the total stock of external public debt owed by these countries, and by the end of 2007 their international reserves even surpassed their total external debt. At the beginning of 2010, developing countries as a group held international reserves which were 20 percentage points of GDP larger than their external public debt and 7 percentage points larger than their total external debt (chart 2.5). However, it should be pointed out that, of 101 developing countries for which data were available, international reserves were larger than total external debt for only 22 countries. The remaining 79 countries still had a net foreign debt. Thus the fact that developing countries, as a group, are no longer net debtors is due to large debt reduction and/or reserve accumulation by some large developing countries and is not representative of the situation of the majority of developing countries.

In developed countries, the public-debt-to-GDP ratio almost doubled between 2007 and 2010.

Even if there are substantial cross-country variations, on average, developing countries have been successful in reducing their external debt ratios. This improvement in debt ratios has been due to a combination of factors. Favourable external conditions and associated rapid GDP growth over the period 2003–2007 certainly played a role in both middle- and low-income countries. Low-income countries also benefited from debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative, even though actual debt relief provided under the Initiative is probably lower than what is reported in official statistics (see *TDR 2008,* chapter VI). In middle-income countries, however, the reduction in external debt was mostly a response to the wave of financial crises that hit many of them, particularly the emerging market economies during the second half of the 1990s.

These crises exposed serious flaws in the current international financial architecture and raised doubts about the ability of the IMF to act as an effective international lender of last resort. They also drew the attention of economists and policymakers to the importance of debt composition and currency mismatches. (Krugman, 1999; Eichengreen and Hausmann, 1999; Eichengreen, Hausmann and Panizza, 2005). It became clear how risky foreign debt was in the absence of a well-functioning international financial architecture and an effective lender of last resort. Consequently, many emerging market economies initiated macroeconomic and debt management strategies explicitly aimed at reducing their external debt.

Besides reducing their need to borrow abroad by running current-account surpluses, many of these countries also sought to improve the operations of their domestic debt markets.[7] They were thus able to issue more debt at a fixed rate and denominated in domestic currency, and to extend the average maturity of the domestic public debt. A recent survey of the domestic bond market in 23 emerging market economies shows that approximately 70 per cent of their domestic bonds (public and private) are now issued at a fixed rate. Bonds issued on the domestic market are also becoming long-dated. A survey of government bonds in the same 23 emerging and developing countries shows that the average original maturity of these bonds is now 9 years, up from 7 years in 2000 (Hausmann and Panizza, 2011).

Currency mismatches associated with foreign-currency-denominated debt play a major role in limiting a country's macroeconomic policy space. Countries with large mismatches in their aggregate balance sheets tend to have less room for countercyclical fiscal policies and often adopt a monetary policy stance that is geared towards achieving currency stability rather than output growth. In 2008–2009, lower external borrowing and rapid reserve accumulation contributed to a decline in currency mismatches, which in turn enabled many developing countries to implement countercyclical monetary policies.

2. The contribution of non-fiscal factors to debt crises

"Financial crisis" is a broad term that encompasses many types of crises. A *public debt crisis* occurs when a government is unable to fully comply with its debt service obligations vis-à-vis either domestic or external creditors. Such a crisis is thus associated with budgetary imbalances that have become unsustainable. An *external debt crisis* originates from a country's overall inability to service its debt owed to external creditors. It is therefore associated with an external transfer problem (Keynes, 1929). This may reflect either private or public domestic imbalances. A *currency crisis* is characterized by a sudden drop in the value of the domestic currency, well below a level justified by the country's macroeconomic fundamentals. It is usually triggered by perceptions and market expectations that affect capital movements. Finally, a *banking crisis* happens when a significant segment of a country's banking sector is either insolvent or is subject to a generalized panic.[8]

While the focus of this section is on public-debt crises, these different types of crises are closely related to each other: one type of crisis often is the cause of the other. Indeed, the other types of crises may interact with, and actually lead to public debt crises.

Debt crises – including public-debt crises – do not always have a fiscal origin. In order to gain a better understanding of this issue, it is worth reviewing some important, albeit abstruse, accounting definitions. A good starting point for discussing the origin of debt crises and the view that debt crises always originate from excessive budget deficits, is the basic public debt accumulation equation. According to this equation, the change in the stock of public debt is equal to the deficit accumulated during the period under consideration, represented as follows: $Debt_{t+1} - Debt_t = Deficit_t$. Practitioners know that this identity rarely holds, and therefore work with the following equation:

$$Change\ in\ Debt = Deficit + Stock\ Flow\ Reconciliation$$

In this set-up, the stock flow reconciliation is a residual entity which reconciles the change in debt (a stock variable) with the deficit (a flow variable). Although practitioners know about the stock-flow reconciliation, this residual term rarely appears in textbook descriptions of the evolution of public debt because it is often assumed to be quantitatively small and driven mainly by measurement error. This is an incorrect assumption; the stock-flow reconciliation is, on the contrary, a key driver of debt growth, and therefore deserves much more attention.

Before discussing the nature of the stock-flow reconciliation, it should be emphasized that it is not the stock of debt that really matters for assessing the risk of a debt crisis, but the relationship between the stock of debt and some other variables, such as GDP, which capture a country's ability to service its debt. Changes in the debt-to-GDP ratio (Δd) are determined by the primary (non-interest) deficit (p), the average interest rate to be paid on the outstanding debt (i x d), the growth rate of the economy multiplied by the initial stock of debt (g x d), and the stock-flow reconciliation (sf), as follows:

$$\Delta d = p + (i \times d) - (g \times d) + sf$$

This decomposition separates the primary deficit from the interest bill because policymakers are supposed to have direct control over the former but only an indirect influence on the latter. Through their monetary and exchange rate policies, governments can influence the interest bill related to domestic and foreign public debt, respectively.

This simple decomposition yields several insights. First, policymakers can directly control only one (two, if policies affecting the interest rate are considered) out of four factors that determine the growth rate of a country's debt-to-GDP ratio. Second, the growth rate of the economy is an important driver of the debt-to-GDP ratio. Contractionary fiscal policies that reduce output growth may therefore increase a country's debt-to-GDP ratio, even if they manage to reduce the primary deficit, which is not guaranteed.[9] Third, even the primary deficit cannot be completely controlled by the fiscal authorities. As already discussed in the previous section, primary deficits tend to rise during slumps and fall during booms because of the impact of automatic stabilizers, such as reductions in tax revenues and increases in

Any policy that seeks to reduce public debt should avoid curbing GDP growth.

transfers (e.g. unemployment benefits). Hence, GDP growth not only affects the denominator but also the numerator of the debt-to-GDP ratio.

Fourth, economies with growth rates that are higher than the nominal interest rate on public debt can reduce their public-debt-to-GDP ratio, even if they run a primary deficit. Under certain conditions, an accommodating monetary policy can improve a country's debt situation by simultaneously reducing the interest bill on domestic debt and increasing GDP growth. However, countries that have foreign-currency-denominated debt, or that do not have control over their own monetary policy, may experience sudden surges in borrowing costs during economic crises, exactly when their ability to pay is limited. Fifth, the stock of debt has only a small effect on debt dynamics, insofar as it does not lead to high interest rates. For instance, in a country with a real interest rate of 3 per cent and a real GDP growth rate of 2 per cent, the initial debt-to-GDP ratio will multiply by 0.01, and even a very large increase in that ratio will have a small effect on fiscal sustainability (i.e. if the debt increases by 50 per cent of GDP, the debt stabilizing primary surplus will increase by 0.5 per cent of GDP). Therefore debt may end up being permanently higher, but it may not necessarily follow a steep growth path. Finally, the decomposition makes it possible to evaluate the importance of the stock-flow reconciliation as a factor contributing to actual debt growth. Indeed, it appears to be a major element in rapid debt increases during times of crisis.

Primary deficits can thus be responsible for a slow accumulation of public debt but they can rarely be blamed for a sudden surge in debt. With respect to the current crisis, for instance, the IMF (2010) estimates that the average debt-to-GDP ratio of developed countries will increase by 35 percentage points over the period 2007–2015. Of this increase, at most 3.5 percentage points will be due to expansionary discretionary fiscal policies. On the other hand, large debt surges frequently result from banking and/or currency crises, which eventually require huge public-funded rescue operations or sudden revaluations of existing foreign-currency-denominated debt. These events usually fall within the stock-flow reconciliation term.

Among recent examples of sudden debt explosions is the Icelandic crisis. At the end of 2007, Iceland had a total government debt of 29 per cent of GDP, which surged to nearly 115 per cent by the end of 2010. This was not caused by irresponsible fiscal policy; budget deficits could explain only one quarter of the total debt increase (22 out of 86 percentage points of GDP), and even these deficits were not due to profligate fiscal policies. Rather, they were a consequence of the economic crisis which followed the collapse of Iceland's largest banks. In the case of Ireland, public debt rose from 25 per cent of GDP in 2007 to 96 per cent by the end of 2010. Of the 71 percentage point difference, 41 points correspond to capital transfers to the financial sector disbursed between 2008 and 2010, 13 points to the remaining public deficit accumulated during this period, and 17 points to stock-flow reconciliation (EC-AMECO database).[10] Hence the bulk of the debt increase cannot be attributed to fiscal policy, and again, the large operating deficits of 2008–2009 were driven by the country's financial collapse and not by explicit fiscal policy decisions.

Primary deficits can cause a slow accumulation of public debt, but sudden surges are generally caused by financial crises, currency devaluations and bank bailouts.

Similar examples exist for emerging market economies. For instance Brazil's net debt-to-GDP ratio stood at approximately 42 per cent in December 1998 and by January 1999 this ratio exceeded 51 per cent. It seems unlikely that the Brazilian Government could have run a deficit of almost 10 per cent of GDP in just one month. In Argentina, in 2001 public debt was about 50 per cent of GDP and by 2002 it was well above 160 per cent of GDP. Again, it seems unlikely that in just one year the Argentinean Government could have run up a deficit equal to 110 per cent of GDP.

The explanations for the debt explosions documented above are well known. In Iceland and Ireland the increase in public debt was due to the governments of these two countries assuming the debts of their banking systems.[11] In Argentina and Brazil, the sudden increase in debt was mainly due to negative balance sheet effects caused by the impact of currency devaluation on the domestic currency value of their foreign-currency-denominated debt. In 2001, more than 90 per cent of the Argentinean public debt was denominated in foreign currency. When the exchange rate between the Argentinean peso and the

dollar changed overnight from 1 peso to 1 dollar to 3 pesos to 1 dollar, Argentina's debt-to-GDP ratio nearly tripled.

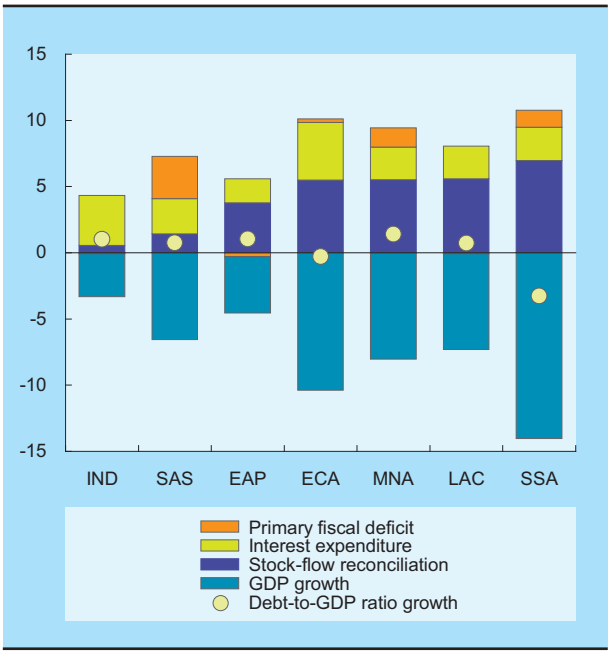
Such events have been important factors in the build-up to public-debt crises in many countries. Chart 2.6, which summarizes the main results of a study using data for up to 117 countries for the 1985–2004 period, shows the importance of stock-flow reconciliation as a determinant of debt growth (Campos, Jaimovich and Panizza, 2006). In the chart, the bars below the zero line show the factors that contribute to a decrease of the debt-to-GDP ratio (mostly nominal GDP growth), and the bars above the zero line show the factors that contribute to an increase of that ratio. The value points measure the difference between the two sets of bars, and thus report the average annual debt growth for each region over the period under observation. Thus, the average debt-to-GDP ratio grew by approximately 1 percentage point per year in the developed economies, in South Asia, Latin America, East Asia and the Middle East and North Africa regions. In the countries of Eastern Europe and Central Asia (for which the data start in the early 1990s) it remained more or less constant, and in countries in sub-Saharan Africa it fell by approximately 3 percentage points per year.

The primary deficit plays a relatively small role in debt growth. Only in three regions (South Asia, the Middle East and North Africa, and sub-Saharan Africa) was the average primary deficit greater than 1 per cent of GDP; in East Asia and Pacific the primary balance showed, on average, a small surplus, whereas in the other regions there was a small deficit. South Asia is the only region where the primary deficit has been the main contributor to debt growth. Developed countries, as a group, ran balanced primary budgets and had fairly large interest payments. In the remaining five regions it was the stock-flow reconciliation that was primarily responsible for debt growth. In developing countries, the stock-flow reconciliation has always been more than 1 per cent of GDP and larger than average debt growth. This suggests that, other things being equal, if the stock-flow reconciliation had been zero, all these regions would have exhibited declining debt ratios during this period. Therefore, the stock-flow reconciliation, rather than being a residual of little importance, is actually a key determinant of debt growth in both developing and developed countries.

Chart 2.6

CONTRIBUTIONS TO GROWTH OF DEBT-TO-GDP RATIO, 1985–2004

(Per cent)



Source: Campos, Jaimovich and Panizza, 2006.
Note: IND: High-income OECD members; SAS: South Asia; EAP: East Asia and Pacific; ECA: Europe and Central Asia; MNA: Middle East and North Africa; LAC: Latin America and the Caribbean; SSA: sub-Saharan Africa. In most developing countries the period covered is 1985–2003.

What factors are responsible for the stock-flow reconciliation? Measurement error may be one factor, since data on the level and composition of public debt tend to be of poor quality (Panizza, 2008) and assembled from various sources which often differ from those used to gather fiscal data. However, if the difference between deficits and the change in debt were purely due to random measurement error, positive errors would compensate for negative errors and the stock-flow reconciliation would average zero over the long run. The data show that this is not the case. The long-running average of the stock-flow reconciliation tends to be positive and large. Campos, Jaimovich and Panizza (2006) show that in countries with a large stock of debt denominated in foreign currency, a depreciation of the domestic currency is associated with a large increase in the debt-to-GDP ratio. This finding, which is in line with the experiences of

Argentina and Brazil, as mentioned above, confirms that balance-sheet effects associated with currency mismatches can indeed have a dramatic consequence for debt sustainability. The same research also finds that banking crises are often followed by sudden jumps in the stock-flow reconciliation. In a study that uses data going back to the nineteenth century, Reinhart and Rogoff (2010) find evidence that banking crises tend to precede sovereign debt crises, and that they are a good predictor of sovereign default. The stock-flow reconciliation may also be linked to governments' inability to keep track of and report their contingent liabilities (some of which arise from excessive borrowing from local governments).

Increasing the transparency of fiscal accounts would contribute to solving this problem. A partial solution would be for countries to adopt an asset-liability management framework which would allow them to keep track of the overall evolution of the government's balance sheet. More generally, currency mismatches and contingent liabilities caused by the financial sector pose significant fiscal risk for governments, and make them vulnerable to macroeconomic shocks. It would therefore be advisable for them to adopt a macroeconomic and dynamic view of fiscal accounts and public debt in the same way that private financial risks need macroprudential surveillance in addition to microprudential rules.

D. Conclusions

The current obsession with fiscal tightening in many countries is misguided, as it risks tackling the symptoms of the problem while leaving the basic causes unchanged. In virtually all countries, the fiscal deficit has been a consequence of the global financial crisis, and not a cause. Few countries ran large fiscal deficits before the crisis; indeed, some were even in surplus. Today's fiscal deficits are an inevitable outcome of automatic stabilizers and measures aimed at countering the effects of the crisis, including policy-driven stimulus packages that involved increased government spending, lower tax rates and public-funded bailouts of financial institutions. Empirical evidence from different countries and regions shows that the crisis was caused by underlying changes in national competitiveness and private sector imbalances, which were closely related to a malfunctioning financial sector in developed countries. These fundamental causes are not being addressed in the current focus on fiscal tightening in some countries. Worse still, the diversion of attention away from the underlying causes and towards so-called fiscal profligacy in other countries, which in turn could eventually lead to fiscal tightening, increases the risk of stalling, or even reversing, economic recovery.

With regard to today's fiscal deficits and public debt, empirical evidence shows that, even though these constitute a relatively high proportion of GDP in some parts of the world – especially in some developed countries – in many countries they are not large by historical standards. Even more significantly, the data show that in all regions of the world, interest payments on the public debt as a percentage of GDP were lower in 2010 than they have been at any time in the past 13 years. With a few extreme exceptions, interest rates have mostly remained low, even though the size of the public debt has increased. Even in the developed countries that are carrying by far the largest public debt as a ratio of GDP, interest repayments in 2010 were significantly lower than in the late 1990s (at 2.7 per cent of GDP compared with 4.4 per cent).

Policymakers should not focus only on debt stock. They need to consider the relationship between the stock of debt and the flow variables, including interest rates and fiscal revenues that affect a country's ability to support its debt. A major factor that influences changes in the burden of public debt is GDP growth: it is virtually impossible to lower high

debt-to-GDP ratios when an economy is stagnant, unless the debtor obtains a significant debt reduction. Hence, the level of a country's fiscal deficit (or surplus) needs to be viewed from a more holistic and dynamic perspective, in the context of its impact on the sustainability of a country's financial position and on its economic stability and growth prospects. From this perspective, the composition of fiscal revenues and expenditures and many other variables that have an impact on a country's fiscal space are also important. These issues are discussed in the next chapter.

Notes

1 The Lawson Doctrine takes its name from a 1988 speech by the then British Chancellor of the Exchequer, Nigel Lawson, when commenting on the current-account deficit of the United Kingdom. He stated that the position of his country was strong because the current-account deficit was driven by private sector, and not public sector, borrowing. The United Kingdom entered into a deep recession soon after that speech. Strictly speaking, the Lawson Doctrine (sometimes referred to as the Lawson-Robichek Doctrine, after Walter Robichek, a senior IMF official in the 1970s, who formulated the doctrine well before Lawson) refers to foreign borrowing and to the accumulation of large external deficits, but similar arguments are often used to justify the large accumulation of private domestic debt.

2 Government savings correspond to the operating balance, which equals current revenues minus current expenditures (including net interest payments).

3 A distinction needs to be made between the *approved aid*, the *actually used amounts* and the *aid element* extended to the financial institutions. According to the Commission, *approved aid* corresponds to the upper limits of support which member States are allowed to grant to the financial institutions. The *actually used amounts* express the actual amount of aid which member States provided through a particular scheme or to a particular financial institution. Finally, the *aid element* expresses the monetary advantage granted to individual banks either through schemes or ad hoc interventions. In most cases the aid element is much lower than the actually used amounts because not the entire amount actually used can be considered as a benefit passed on to a beneficiary. For example, the aid element of a guarantee is the benefit expressed as the difference between a guarantee fee offered by a member State and that offered by the market. However, in some cases it may be difficult to determine the exact amount of the aid element due to lack of information on the prevailing market prices. Therefore, member States and the Commission use particular proxy methods (European Commission, 2010a).

4 Recent estimates suggest that the final cost to the United States Federal Government will amount to $19 billion or less (Congressional Budget Office, 2011). In the EU-27, State aid to the financial sector in 2008 and 2009 represented about 1.7 per cent and 3 per cent, respectively, of EU-27 GDP (European Commission, 2009 and 2010b). In Switzerland, the Government made a $1.1 billion profit by selling its stake in UBS in August 2009 after investing in the bank in the aftermath of the crisis.

5 In this discussion, the classification by income groups follows that of the World Bank, as the data used in this section draw primarily on its databases.

6 Focusing on a simple average of the debt-to-GDP ratio yields a similar result. A weighted average yields even higher debt-to-GDP ratios for the developed countries, mainly because of the large debt-to-GDP ratio of Japan.

7 Some domestically issued debt could be owed to non-residents and thus would count as external debt. Therefore, external debt should not be confused with debt denominated in foreign currency or with debt issued on the international market.

8 To this list, Reinhart and Rogoff (2009) add episodes of high inflation.

9 One way to evaluate how GDP growth affects debt ratios is to compare the actual debt-to-GDP ratio with the debt-to-GDP ratio that would be obtained

by scaling actual debt with trend GDP, estimated by looking at GDP growth over the previous 20 years. Applied to developed economies, this calculation shows that in 2010 the debt-to-trend-GDP ratio was approximately 15 percentage points lower than the actual debt-to-GDP ratio. The difference between the actual debt-to-GDP ratio and debt-to-trend-GDP ratio is even larger (reaching 20 percentage points) if one only considers the European countries that are currently facing some difficulty in the debt market (i.e. Greece, Ireland, Portugal and Spain).

10 Ireland, unlike most other countries, recorded bank bailouts within its fiscal expenditure as capital transfers. Therefore, in this example, most of the costs of the banking crisis are not included in the stock-flow reconciliation.

11 The increase in the net debt of these countries is lower than the increase in gross debt because their governments received some assets (whose real value, however, is probably well below its face value) in exchange for taking over the banks' liabilities.

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