IMPACT OF THE GLOBAL CRISIS ON SUB-NATIONAL GOVERNMENTS' FINANCES

Teresa Ter-Minassian[*] *and Annalisa Fedelino*[**]

1 Introduction

The financial crisis unleashed by the difficulties in the sub-prime mortgage markets of some industrial countries propagated quickly across the globe in the last quarter of 2008, reflecting a vicious circle of frozen credit markets, plunge in business and consumers' confidence, and sharp decline in world trade. Nearly two years after the onset of the crisis, the recovery is still not firmly entrenched in most countries (with the exception of some emerging markets) despite massive monetary and fiscal stimulus. Much has been written about the causes and effects of the crisis and its impact on the public finances of countries across the globe (see, for example, Fiscal Affairs Department, 2010; OECD, 2009; and European Commission, 2009). Most of the latter literature has focused on the impact of the crisis on the finances of federal/central governments (CGs), with significantly less analysis devoted to the effects on the finances of sub-national (regional and local) governments (SNGs). This is likely to reflect both the fact that active counter-cyclical fiscal policy responses to the crisis have been spearheaded by CGs and the lack of timely data on developments in sub-national finances in most countries around the world.

This paper focuses on the impact of the crisis on sub-national finances, utilizing qualitative information, as well as the limited quantitative one available for some countries. Following a brief review of national fiscal policy responses to the crisis and of the effects of such responses on sub-national budgets in a range of countries, the paper analyzes the various channels through which the downturn has impacted SNGs in different types of countries and their own policy responses. It finds that, while some SNGs have been able to avoid a pro-cyclical policy response, through increased support by their respective CGs and by utilizing their own available "fiscal space",[1] many have been forced to respond to the reduced availability of revenues and/or financing by cutting their expenditures, often on socially sensitive programs. The paper concludes with some reflections on the appropriate role of SNGs in fiscal stabilization and on reforms in intergovernmental fiscal arrangements that could facilitate such a role in a fiscally sustainable way.

2 National fiscal responses to the crisis

The 2008-09 global financial crisis imparted a shock to the global economy unprecedented in several decades in terms of both reach and intensity. In its latest World Economic Outlook (April 2010), the IMF estimates that world output fell in 2009 by 0.6 per cent, with the GDP of advanced economies declining on average by 3.2 per cent and that of emerging and developing countries rising by 2.4 per cent, which implies little, if any, growth in real per capita income. The crisis has taken a steep toll on living standards of vulnerable income groups, as a result of the increase in unemployment, which, especially in countries with less developed social safety nets, has pushed many families below the poverty level.

While the shock affected most countries in the world, its impact was felt in different measures by different countries, reflecting their relative vulnerabilities, in particular their degree of

---

[*] Formerly IMF.

[**] IMF.

An earlier version of this paper was published in the 2009 World Report on Fiscal Federalism of the Institut d'Economia de Barcelona.

[1] For a discussion of the concept of fiscal space, see Heller (2005).

trade and financial openness and exposure to sectors (such as housing, financial and automotive) most affected by the downturn in demand. These factors have also caused a wide variance in both the economic and the social effects of the crisis in different regions and localities within individual countries. For example, in the U.S. the impact of the crisis has been felt most strongly in those states (such as California, Florida, Nevada and Michigan) and cities (such as New York) where housing prices have declined more sharply, or which were more dependent on especially affected sectors, such as the automotive or financial ones. The declines in oil, metals and other basic commodities' prices from their peak levels in mid-2008 impacted more strongly countries (such as Russia, Mexico, Chile, Venezuela and Nigeria) and regions more heavily dependent on resource revenues.

The limited effectiveness of monetary policy in conditions of dysfunctional credit markets brought again to the forefront the stabilization role of fiscal policy. Depending on the intensity of the shock and their perceived availability of fiscal space, countries:

- accommodated the impact of the crisis on revenues and cyclically-sensitive expenditure (a "passive" counter-cyclical policy). Figure 1 shows the decomposition of the estimated 2009-10 budgetary expansion in the G-20 countries into endogenous factors and discretionary measures. The former include both the so-called automatic stabilizers (responses of revenues and expenditures to developments in the output gap) and other factors (such as declines in asset prices and commodity prices; and in tax compliance and enforcement);[2]
- adopted discretionary stimulus packages, including tax cuts and/or increases in a variety of social and infrastructure expenditure programs (discretionary or "active" counter-cyclical policy). Figure 2 shows the average composition of such packages for the countries in the G-20 group (which account for almost 90 per cent of global GDP); and
- undertook a variety of extra-budgetary or "below the line" operations (such as equity injections or purchases of troubled assets) to support public or private (financial and non-financial) enterprises. These operations are not necessarily reflected in the measures of government deficits, but they do increase the public debt. In addition, many countries provided such support through the granting of guarantees, thereby creating substantial contingent liabilities for their future budgets (see Horton *et al.*, 2009, for details).

These steps resulted in large increases in the deficits and public debt of many advanced countries and of a number of developing ones (Figure 3). These deficits were financed through the use of accumulated reserves, increased borrowing from domestic and external markets and, in many emerging and low-income countries, from multilateral lenders, such as the IMF, the World Bank and regional MDBs. However, some countries with initially high levels of deficits and debt and more limited financing possibilities, were unable to avoid a pro-cyclical fiscal tightening. This has been the case for instance in a number of countries in Central and Eastern Europe and in some countries heavily dependent on resource revenues, such as Venezuela and Ecuador (CEPAL, 2009; and IMF, 2009). More recently, market concerns about the medium-term sustainability of the increased debt have forced an early tightening of budgets in a number of advanced countries as well (e.g., in the U.K. and Southern Europe).

The escalation of public deficits and debt, which is unlikely to be reversed simply by the unwinding of temporary stimulus measures and by the foreseeable recovery of revenues as activity picks up (see Fiscal Affairs Department, 2010), will pose difficult challenges for policy makers to ensure longer-term fiscal sustainability, especially in the face of the increasing cost of pension and health systems in rapidly aging societies. Undoubtedly, given their rising share in expenditure responsibilities, SNGs will be called to make contributions towards the fiscal consolidation efforts looming ahead.

---

2 See Brondolo (2009) for a discussion of tax compliance during crisis periods.

Figure 1

Decomposition of Fiscal Expansions in G-20s, 2009-10
(percent of GDP)

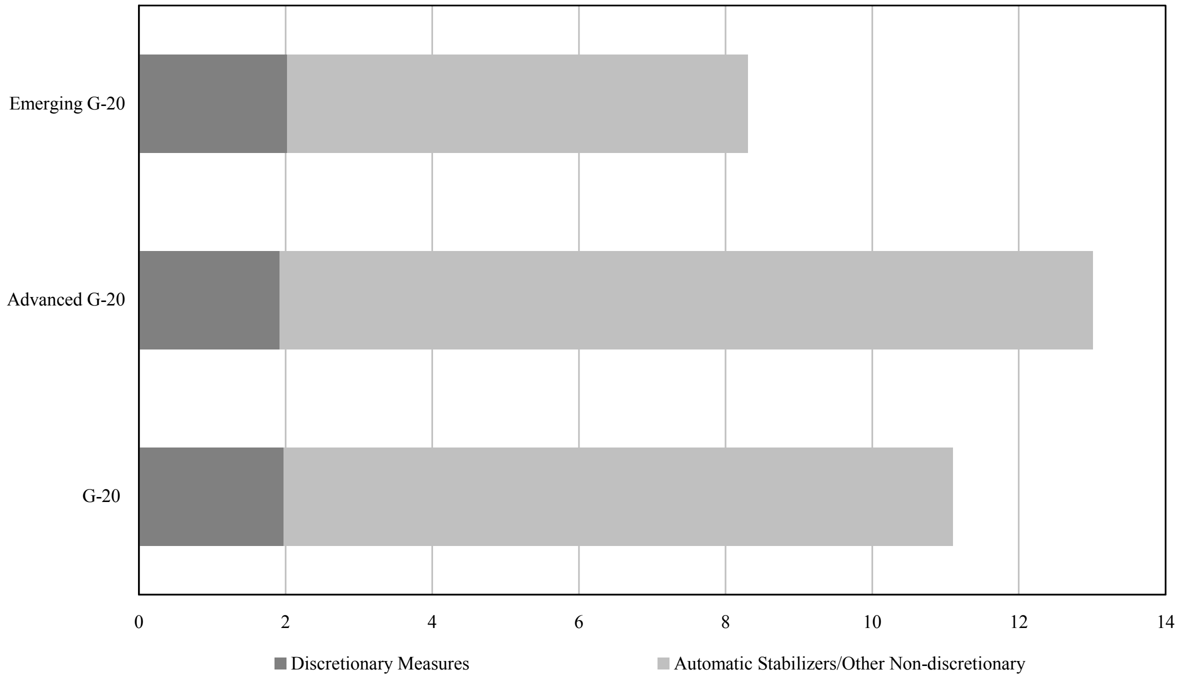


Figure 2

Composition of G-20 Stimulus Packages
(percent of total, based on 2009-10 averages)

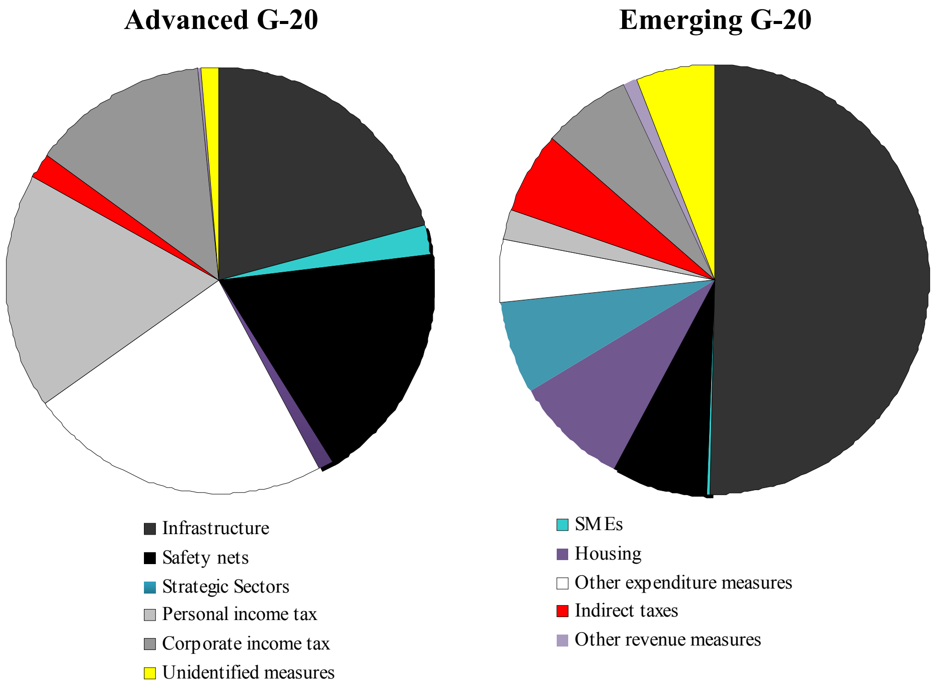
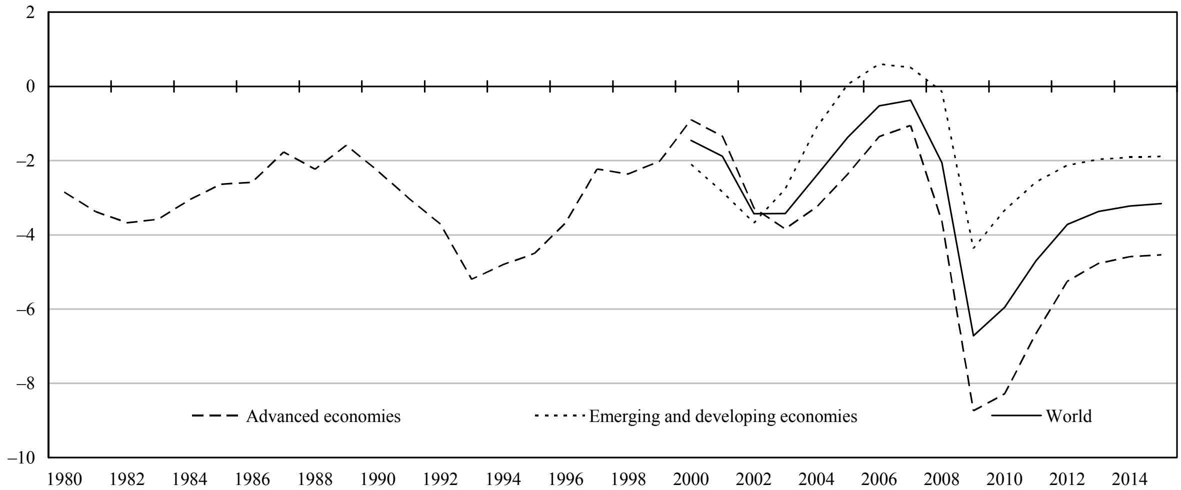


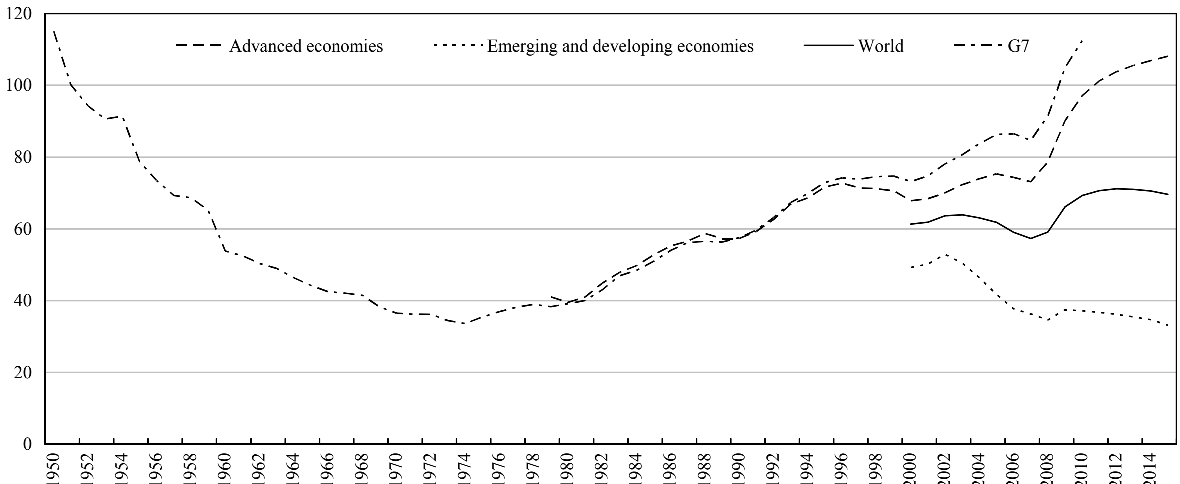
Figure 3

Fiscal Balances and Public Debt, 1990-2014
(percent of GDP)

Fiscal Balance



Public Debt



3 Effects of the crisis on SNGs' finances

The crisis has affected SNGs' finances both directly and through its impact on the budgets of CGs and their policy responses. This section of the paper reviews the various channels of impact. Unfortunately, given the significant delays with which data on SNGs' accounts become available (see Box 1 for details), most of the analysis in this section has to be based on qualitative (in some cases anecdotal) information. Boxes 2 and 3 present more specific information for, respectively, the U.S. states, where national sources of recent data are more easily available, and Brazil, where the existing Fiscal Responsibility Law requires the publication of bi-monthly summary fiscal accounts for all levels of government.

Box 1
Cross-country Data Sources on Sub-national Finances

Timely and reliable information on sub-national public finances is unfortunately scarce. When available, such data are often not comparable across countries (and even within countries), and are subject in most cases to substantial delays. The lack of standardized recording and reporting practices across government levels – and even among jurisdictions at the same level – hampers the collection of sub-national fiscal statistics. The countries for which sub-national data are more easily available tend to be federal ones, with well-developed sub-national governments, thus not necessarily being representative of the majority of countries.

A few cross-country databases are available, but they offer limited coverage.

- The Government Finance Statistics (GFS) database, maintained by the International Monetary Fund, is probably the best source of internationally comparable data on fiscal variables by government level. It currently contains fiscal data for 152 countries, but includes disaggregated data on sub-national government operations for only about 60.[a] Even for those countries, however, time series are incomplete, and subject to substantial lags. Moreover, no information is available on a more disaggregated basis, thus making it impossible to analyze differences among (relevant groups of) jurisdictions within the same government level. Finally, the database does not provide information on the degree of sub-national autonomy in revenue and spending programs.
- The OECD, under its Network on Fiscal Relations across Levels of Government,, has promoted efforts to collect data on sub-national finances, and information on relevant institutional dimensions – such as the design and management of expenditure and revenue assignments, transfers and borrowing arrangements, largely based on country surveys. This information is generally limited to the 30 OECD countries.
- The EUROSTAT database on public finances includes annual data on SNGs for the EU members, but only at an aggregated level. The latest values refer to 2008.
- The World Bank, under its Decentralization Thematic Group, has made available a database on quantitative and qualitative fiscal, political and administrative variables at the sub-national level. The database provides a useful consolidated source of data, put together largely by collating information from GFS, OECD, and other sources. However, it has not been updated in recent years; and its coverage on qualitative information, for about 40 countries, remains limited.
- The Economic Commission for Latin America and the Caribbean (CEPAL) has assembled a well-developed historical database on sub-national government operations for the region, currently extending to end-2007.

[a] The tally is based on countries for which there is at least one entry over the period 2002-06.

Sources: GFS database; Ebel and Yilmaz (2002); OECD fiscal decentralization network (available at: http://www.oecd.org/department/0,3355,en_2649_35929024_1_1_1_1_1,00.html) and World Bank Fiscal Decentralization website (available at: http://go.worldbank.org/6YJ412AQY0).

Box 2
The Impact of the Crisis on the U.S. States

In the United States, virtually all states (Vermont being the exception) are mandated to balance their budgets.[a] This has proved an impossible task in the current crisis, given the spending pressures and drop in revenue induced by the crisis: in FY2009, revenues dropped significantly below levels recorded in FY2008 in virtually all states, while spending pressures, especially on social safety net programs, continued to increase. As a result, the states' budgetary gaps totaled some US$110 billion. The gap widened further in FY2010, to around US$ 210 billion. Part of these gaps was covered by increased transfers from the Federal Government under the American Recovery and Reinvestment Act (ARRA) of 2009, to fund additional investments, as well as selected social programs (e.g., Medicaid). The remaining gaps could only partly be filled by drawing down accumulated liquid balances (the so-called "rainy day funds"), thereby requiring varying combinations of (pro-cyclical) tax increases and spending cuts. States' contributions to pension funds for their employees were also reduced in some instances, creating (or increasing) future liabilities in this area.

California offers a dramatic example of the impact of the crisis. Its initial budget gap for FY2010 was $24.8 billion, which, along with the US$14.8 billion gap for FY2009, was supposed to be resolved in a February 2009 budget agreement. The resolution included five ballot measures that were rejected by voters in a May special election; meanwhile the projected budget gap continued unabated, reaching US$60 billion by July – unprecedented in size and stemming for the largest part (80 per cent) from revenue shortfalls (California had to start issuing IOUs as means of payment to taxpayers and suppliers over the summer). The 2010 budget finally agreed between the Executive and the Legislature included wide-ranging measures to close the gap, covering revenue increases and drastic cuts in practically every state program financed by the general fund (by about US$31 billion). Federal stimulus funds provided an additional US$8 billion.

According to a recent report by the Center On Budget and Policy Priorities, budgetary prospects for U.S. states are worsening further in FY 2011, since the recovery is relatively subdued, the growth of personal and company incomes remains sluggish and unemployment is hardly declining. Although the overall *ex ante* budgetary gap is projected to moderate (to around US$ 180 billion), states will be facing also a sharp decline in support from the federal government, given the expiration of ARRA and Congress' refusal to date to extend the funding of Medicaid for unemployed workers. Thus, most states' approved budgets for FY2011 include further substantial cuts in social assistance and education programs (with attendant layoffs of state employees), as well as in a number of cases increases in sales, excise taxes and user fees, or cuts in tax exemptions.

[a] These rules have constitutional or statutory basis and apply *ex ante* (beginning-of-the-year) or *ex post* (end-of-the-year). They limit ability to run deficits in the state's "general fund;" other funds – capital, pensions and social insurance – can be used as potential sources of deficit financing. For more detail, see Bohn and Inman (1996). Most states' fiscal years begin on July 1 of the preceding calendar year.

Source: Center on Budget and Policy Priorities (2010).

Box 3
Preliminary Evidence on the Impact of the Crisis on SNGs in Brazil

In contrast with many advanced and most developing countries, Brazil compiles and publishes bi-monthly summary budgetary accounts of states and municipalities. These accounts complement the monthly cash accounts of the federal government, published by the National Treasury, and the monthly below-the-line accounts of the public sector (disaggregated by level of government) published by the Central Bank. This commendable, but unfortunately uncommon, wealth of information on sub-national finances is the result of the Fiscal Responsibility Law, enacted in 2001, which established standardized accounting and reporting requirements for each entity of the Federation.

The impact of the global financial crisis on Brazil's economy was intense but relatively short, with a recovery starting already in the second quarter of 2009. As a result, GDP fell only modestly (by 0.2 per cent on average in 2009) and is projected to grow strongly again in 2010. The primary surplus of the consolidated non-financial public sector (NFPS) deteriorated significantly (from around 3.5 per cent of GDP in 2008 to around 2 per cent of GDP in 2009), reflecting both the operation of automatic stabilizers and discretionary stimulus measures (selected temporary tax reductions and significant increases in both current and capital spending). However, the deterioration in the fiscal accounts was more pronounced in the federal than in the sub-national budgets. The primary surplus of the CG fell by the equivalent of 1 percentage point of GDP while the consolidated primary surplus of the states declined by only 0.3 per cent of GDP and that of municipalities was nearly unchanged from the previous year. Restrictions on sub-national borrowing, stemming from the existing debt refinancing agreements with the federal government, limited the extent to which states and municipalities could accommodate the cyclical decline in own and shared revenues, requiring some pro-cyclical adjustment in spending in most of them. States more dependent on revenues shared with the federal government were comparatively more affected, as in general own revenues of the states (mainly the VAT-type ICMS) and municipalities (in particular the tax on services) outperformed shared ones. Some of the larger states intensified their programs of concessions, to complement increased spending on infrastructure.

Available data for the first five months of 2010 indicate that the fiscal performance of the SNGs (as well as of the federal government) broadly stabilized at the level of 2009, despite the pronounced recovery in activity, pointing to a pro-cyclical stance of fiscal policy during the upturn, as well as the downturn, phase of the cycle.

Source: Afonso, Carvalho and Castro (2010), and Central Bank of Brazil, June 2010 press release on Public Sector.

3.1 Effects of national fiscal responses on sub-national finances

The significant increase over the last decades in the shares of SNGs in total general government expenditures (which currently exceed 30 per cent on average and 60 per cent for capital spending in the OECD area) has implied that a sizable part of stimulus spending, albeit decided and financed by CGs, had to be executed by SNGs. The capacity of individual sub-national jurisdictions to execute quickly and efficiently the additional spending affected significantly the effectiveness of stimulus packages. Predictably, measures focusing on support to households through various social expenditure programs were implemented more quickly than infrastructure investments. A number of countries (e.g., Australia, Canada, France and the U.S.) took steps to speed up regional and local implementation of the additional spending by*, inter alia*, simplifying procedures for approval and disbursement of the additional CG transfers earmarked for the stimulus expenditures; stipulating short sunset clauses and setting up strengthened monitoring procedures for the utilization of the funds by SNGs; and through other financial incentives (e. g., the French Fonds de Compensation de la TVA).[3] A reliable assessment of the success of such steps will, however, have to await the publication of outturn data for SNGs' operations. Even more difficult would be an assessment of the extent to which quality may have been traded off for speed in the implementation of investment projects.

On the revenue side, some tax measures implemented by CGs as part of stimulus packages involved losses of shared revenues for sub-national budgets. These losses were not always fully compensated by increased transfers from the CG to the affected SNGs (e.g., the abolition of the local business tax in France; the temporary cut in the excise (IPI) tax on automobiles in Brazil). More importantly, SNGs' budgets in many countries were adversely affected by losses in shared CG revenues entailed by the operation of the automatic stabilizers and the other factors mentioned in Section 2 above. As in many countries shared revenues account for more than half of the total tax revenues of regional governments (less for local governments),[4] a passive counter-cyclical policy by the CG, accommodating the endogenous decline in its revenues, would shift a significant part of the revenue loss to the SNGs, unless compensated by increased transfers to the latter. Although little firm quantitative evidence is available yet, it is likely that losses in shared revenues were more pronounced in countries relatively more affected by the cyclical downturn and/or by commodity price declines, or with larger automatic stabilizers.

3.2 Direct effects of the crisis on SNGs' budgets

The crisis also impacted sub-national budgets directly, through a number of channels:

- declines in the bases of own (income, sales or property) taxes, induced by falls in aggregate demand, output and employment; asset prices (especially real estate); and commodity prices (for resource revenues-dependent regions);
- A weakening of tax compliance by liquidity- and financing-constrained taxpayers; and possibly political pressures on tax authorities to ease enforcement on such taxpayers;
- upward pressure on cyclically-sensitive sub-national spending programs, such as assistance to the rising number of unemployed or families falling under poverty thresholds;
- pressures to bail out financial and non-financial enterprises, either publicly owned or deemed of strategic importance to regional or local economies;

---

[3] The Fonds de Compensation de la TVA has been set up by the French government to fund accelerated VAT refunds to SNGs that commit to increase investments above their average 2004-07 levels. See Dexia (2009).

[4] According to OECD estimates, shared revenues account for about 47 per cent of total state revenues, and for 33 per cent of local revenues in the OECD area. These figures are likely to be higher on average for non-OECD countries.

- increases in interest payments, reflecting higher financing needs and/or financing costs;
- in some cases (e.g., some states and municipalities in the U.S., U.K. and France), losses on financial investments, including of pension funds for state or local employees, or on structured loans.[5]

The severity of these impacts on individual SNGs is likely to have varied significantly across and within countries, reflecting in particular:

- the extent of the decline in regional/local output and employment, as explained in Section 2 above;
- the structure of own revenues, with regions relatively more dependent on resource revenues, or on business taxes, comparatively more affected;
- the extent of sub-national responsibility for more cyclically sensitive expenditures, for example unemployment compensation (which in most countries is a CG responsibility, but in some others, such as the U.S., is shared with state governments); and
- the structure of the sub-national debt, with SNGs having debts of shorter average maturities and at variable rates, or (in countries with depreciating currencies) debts denominated in foreign currency, comparatively worse off.

4 SNGs' policy responses

Policy responses by SNGs to the crisis have ranged widely, reflecting not only the extent and expected duration of the shock, but also a number of other factors, in particular:

- the nature and extent of support by the CG;
- the degree of autonomy of different SNGs in revenue-raising and spending decisions;
- the presence or absence of binding legal constraints on sub-national deficits and debt;
- the existence, or not, of accumulated reserves to finance higher deficits;
- the availability and cost of additional market or official financing.

The varying combined impact of these factors facilitated an active, or at least a passive, countercyclical stance by some SNGs, but required a pro-cyclical one by others. This section discusses some of the factors in greater detail and illustrates through some representative examples the range of sub-national policy responses to date.

4.1 Increased CG support to SNGs

Increased budgetary support by CGs to their sub-national jurisdictions has taken different forms across countries:

- *Increases in general-purpose or earmarked transfers*

  Increases in general purpose transfers (which in principle could include temporary modifications of revenue-sharing formulas) have the advantage of greater transparency in the allocation of additional resources across regions and localities; and also of greater respect of sub-national autonomy in spending decisions. On the other hand, increases in general purpose-transfers (or changes in revenue-sharing arrangements) may be more difficult to reverse during the upturn of the cycle than those in transfers earmarked to fund specific stimulus

[5] Munnell *et al.* (2008) present an interesting analysis of the impact of the financial crisis on defined benefits pension plans of state and local governments in the U.S.

measures. They are also less appropriate to compensate for asymmetric effects of the crisis across SNGs within a country.

In contrast, special-purpose transfers facilitate the targeting of the increased support by the CG to the most impacted regions and localities, as well as the coordination of stimulus spending programs across government levels. They are, however, more easily subject to political manipulation, unless the criteria for their allocation and their use by recipient jurisdictions, are clearly spelled out and can be adequately monitored and enforced (which is not frequently the case, given the data limitations mentioned above).

A survey of its members by the OECD (2010) suggests that national governments in the area preferred earmarked transfers to general-purpose ones, the latter having been chosen only by Japan and the Scandinavian countries (for example, Finland raised the local governments' share of the corporate tax from 22 per cent to 32 per cent for the period 2009-11). Outside the OECD area, Russia also increased general-purpose transfers, alongside special-purpose ones, and Argentina raised temporarily the share of its export tax devoted to the provinces. The increased special-purpose transfers were used mainly to fund additional investment projects, and in some cases were targeted to regions especially affected by the crisis. As indicated in Section 2 above, some countries, such as Australia, took steps to strengthen existing mechanisms to monitor the use of the increased transfers by the recipient governments.

- *Temporary easing of legal borrowing constraints on SNGs*

  Some CGs took steps to suspend balanced budget rules, or to temporarily ease budget or debt limits for SNGs, to allow them to accommodate wholly or partly the impact of the recession on their finances. For example, Sweden replaced temporarily the balanced budget rule for local governments with a less stringent "sound financial management" requirement. Spain passed legislation to allow municipalities to borrow in the market to settle arrears to their suppliers. Argentina enacted a new, significantly watered down, version of its Fiscal Responsibility Law. In Italy, as part of the anti-crisis package passed in early 2009, the Domestic Stability Pact – the set of rules governing sub-national fiscal behavior – was modified to provide some room for counter-cyclical policies, by allowing the exclusion of some additional expenditure from defined spending limits and the sale of assets to meet debt obligations. The experience of China, where the CG issued bonds for the provinces, is briefly described in Box 4. Finally, in some other countries, CGs simply did not react to breaches by their SNGs of existing debt or deficit limits.

  While such approaches may have been instrumental in avoiding a pro-cyclical fiscal stance by SNGs in a number of countries, they involve significant moral hazard risks, potentially harming the credibility of fiscal rules and fiscal responsibility legislations in the future. Temporary suspensions of fiscal rules may not be easily reversed during the next upturn of the cycle, which argues for more permanent changes in the fiscal framework that would explicitly facilitate counter-cyclical responses in the future (see Section 5). Finally, a removal (or easing) of legal constraints on borrowing may not provide effective relief to SNGs, if they face market constraints on such borrowing.

- *Increased CG financing of SNGs*

  A number of national governments moved to facilitate the financing of increased sub-national deficits through direct loans to their SNGs, or through guarantees of SNGs' borrowing from market or official (e.g., multilateral development banks) sources. For example, the Canadian government approved CAN$ 2 billion in subsidized loans to municipalities, to finance improvements in housing-related infrastructure. The U.S. federal government subsidized (as part of its stimulus package) the so-called Build America Bonds, to fund a range of state and local infrastructure projects. Similar mechanisms were introduced in Switzerland. Brazil offered credits at below market terms to its states as a partial compensation for the loss of shared IPI

BOX 4
China's Relaxation of Sub-national Borrowing Constraints

Local governments in China are in principle subject to strict borrowing constraints. According to the 1994 Budget Law, local governments are not allowed to borrow from banks or issue bonds without prior authorization of the State Council. Similarly, the 1995 Guarantee Law requires prior authorization of the State Council for issuance of guarantees. On-lending from the central government has been the main financing channel available to local governments, mainly via external loans and treasury bonds issued by the central government.[a] This channel has been used more intensely in the years following the 1998 Asian crisis, in particular to finance investment projects in specific sectors.

In 2009, as part of the fiscal stimulus measures, the central government decided to issue "sub-national government bonds" in the amount of RMB 200 billion (US$30 billion). These bonds represent a novelty, as the issuer and debtor is nominally a provincial government, but the Ministry of Finance actually issues the bonds and guarantees principal and interest payments. According to the government, this initiative offers several advantages, compared to on-lending. These bonds can be more transparently recorded as sub-national liabilities; at the same time, the issuance by the central government lowers financing costs for sub-nationals; finally, the central government has more expertise in this area, thus ensuring some efficiency and promoting uniformity and common treatment in these transactions.

[a] On-lent resources are usually earmarked for capital projects and disbursed directly to the project management; in these cases, the local government acts as a guarantor.

Source: China Ministry of Finance, 2009.

revenues resulting from selective cuts in that tax. Australia stepped up its guarantees for market borrowing by the states.

Interventions of this type may provide effective temporary relief for SNGs affected by the credit crunch, but pose moral hazard risks and should be granted only on the basis of fully transparent criteria, to avoid the risk of being used for political favoritism. At a minimum, CGs should create the right incentives for SNGs to repay these loans in the future by requiring adequate collateral (e.g., by allowing the withholding of shared revenues or other inter-governmental transfers to defaulting jurisdictions, as is done in Brazil).

4.2 SNGs' options to increase financing

A number of options are in principle available to SNGs to finance automatic or discretionary revenue reductions and/or expenditure increases. The availability and extent of these options in practice is likely to vary widely across and within countries, reflecting a range of economic and institutional factors. These options include:

- the launching of new public-private partnerships (PPPs) to fund planned expansion or maintenance of infrastructure. PPPs can be a useful mechanism to involve the private sector in infrastructure projects, but, to ensure the desired efficiency gains from the partnerships, they need to be well structured, with an appropriate sharing of risks between the private and the public partners, and therefore require substantial know-how and lead-time for preparation. (Hemming, 2006) As such, they are unlikely to be usable on a significant scale for counter-cyclical sub-national investments;

- the launching of new concessions for the operation and maintenance of existing infrastructure. Although less demanding than new PPPs, these contracts also require significant local negotiating capacity and time;
- sales of existing sub-national real assets (e.g., buildings). The scope of this option may be limited during a crisis like the recent one, in which real estate values fell steeply in many countries;
- use of accumulated financial assets or bank balances (e.g., the so-called "rainy day funds").[6] This option may also be constrained by financial market conditions (*i.e.*, to avoid fire sales of the assets). Moreover, the experience so far in the U.S. states suggests that rainy day funds were not sufficient to finance the increases in deficits originated by the crisis. In any event, it is important that the use of such funds be guided by transparent criteria, specified in advance of the crisis, leaving little room for discretion, for example in the decision to start drawing on the fund and the speed of its utilization. In some other countries (for example, Colombia and Indonesia) previously accumulated cash balances have provided a useful buffer to mitigate the impact of the crisis;
- increased borrowing. As indicated above, this option may be more or less severely constrained by existing legal limitations. Even in the absence of such limitations, market conditions are likely to affect adversely the availability and terms of sub-national borrowing during a financial crisis. This was vividly demonstrated by the financing difficulties experienced by some U.S. states (e.g., California) and municipalities (that witnessed a sudden collapse of the municipal bond market in the peak months of the crisis). Finally, even if not constrained by statutory limits and/or market conditions, increased borrowing should only be undertaken by SNGs to the extent consistent with their medium-term debt sustainability. This of course implies that SNGs with initially low and well structured debts are better positioned to avoid pro-cyclical fiscal responses to a crisis like the recent one.

4.3 Counter-cyclical fiscal responses by SNGs

A number of SNGs used their available fiscal space – whether created by increased CG support, use of various financing options, or a combination thereof – to respond to the global financial crisis in a counter-cyclical way. In some cases (e.g., Denmark and Korea), this involved simply accommodating the operation of the automatic stabilizers discussed in Section 3 above (a passive counter-cyclical response). But others engaged in more active fiscal stimulus measures, through reductions in own taxes and/or discretionary spending increases.

In the OECD area, examples of counter-cyclical sub-national tax cuts can be found in Canada, Japan and Switzerland, as well as in some EU members (see OECD, 2010 for details). In general, tax reductions at the sub-national level would seem to be less efficient stimulus instruments than spending increases of equivalent cost to the budget. This is the case not only because multipliers tend to be higher for spending than tax measures, but also because tax cuts may promote a "race to the bottom" in sub-national taxation (which is already relatively low in most countries). Moreover, measures involving increases in exemptions or preferential treatments under

[6] See Balassone *et al.* (2007), for an analysis of experiences with rainy day funds.

existing sub-national taxes reduce horizontal equity and strain the already limited resources of sub-national tax administrations.

Discretionary spending increases (sometimes as local counterpart for CGs' stimulus spending programs) were implemented by SNGs in a wide range of countries, both inside and outside the OECD area. They tended to focus in particular on: infrastructure investment, improvements in social assistance programs and, in some cases, support to local enterprises. The latter can in principle be effective in providing temporary, targeted support to activity and employment in especially affected, but ultimately viable, sectors. But, in practice it is often difficult to avoid that the support becomes entrenched and props up ultimately unviable firms.

4.4 Pro-cyclical policy responses by SNGs

Binding (statutory or market) financing constraints forced, however, pro-cyclical responses by many SNGs worldwide. These included both measures to boost own revenues and selective cuts in spending programs. The former ranged from increases in the rates of sub-national taxes, to reductions in exemptions, to increases in non-tax revenues, such as user fees. Rates increases (especially in excises on tobacco, alcohol, luxury goods and services, and out of state purchases; and in business and property taxes) were enacted by some SNGs in Australia, France, Sweden, the U.K. and the U.S. But more prevalent have been selective cuts in expenditure programs, including postponement of some previously planned investments. The composition of such cuts has been influenced in some cases by institutional rigidities, such as the entitlement nature of some spending programs, earmarking provisions, or other legal restrictions (such as the requirement that California devote a fixed share of its budget to education). Many SNGs implemented hiring freezes and/or used available flexibility in their employment legislation to enact layoffs of civil servants on their payroll.

5 Lessons from experience

As noted above, the recent global crisis has brought once again to the fore the stabilization function of fiscal policy. At the same time, it has rekindled a long-standing debate about the appropriate role of SNGs in this function. The traditional view in the literature (first put forward by Musgrave in his seminal textbook of 1959) has been that the comparative advantage of SNGs is in resource allocation; redistribution and, even more, economic stabilization are best carried out by the CG. Under this approach, SNGs should refrain from active counter-cyclical fiscal policies, although they may act as agents of the CG in carrying out expenditure stimulus measures decided and funded by the latter. This view reflects a number of considerations:

- first, the need to coordinate fiscal stabilization with other macroeconomic policies, notably monetary and exchange rate ones, that are a prerogative of CGs;
- second, the risk that SNGs engage in counter-cyclical fiscal expansions even if they do not have adequate fiscal space for such policies, a risk heightened by the "common pool" problem and by any perceived likelihood of eventual bailouts by the CG;
- third, the likelihood of significant leakages in the effects of sub-national countercyclical policies in an economic space (the nation) that is typically characterized by high mobility of goods and factors of production;
- fourth, the risks of adverse spillovers of individual SNGs' actions on other jurisdictions. For example, during a recession, some SNGs could engage in predatory tax competition, to bid away dwindling investment and job creation opportunities from other SNGs. Also, excessive borrowing, especially by large SNGs, to finance counter-cyclical spending could put upward

pressure on domestic interest rates, or lead to a generalized deterioration of spreads for the whole country;

- fifth, the fact that typically CGs have greater access to financing, and at better terms, than their SNGs, and therefore are better placed to finance countercyclical fiscal expansions during downturns;
- finally, the fact that CGs can redistribute budgetary resources across their SNGs, to counteract asymmetries in exogenous shocks affecting lower-level governments.

While these considerations are very significant, there are also counterarguments that are acquiring increasing importance as decentralization progresses around the world:

- first, with decentralization reducing CGs' share of total public spending and concentrating it in the less flexible expenditure categories, such as pensions and interest payments, CGs' scope for conducting counter-cyclical expenditure policies on their own is being progressively eroded;
- second, as demonstrated by the experiences of many SNGs discussed in the preceding sections, the impact of counter-cyclical policies of CGs can be significantly offset by pro-cyclical policies of SNGs;
- third, an approach that places the whole burden of economic stabilization on CGs' budgets undermines incentives for SNGs to build both fiscal space and institutional capacity to respond to cyclical developments and exogenous shocks;
- finally, sub-national fiscal responses to regionally asymmetric shocks (such as a decline in commodity prices) may be appropriate if the CG's response to the shocks does not properly take into account such asymmetries. Political economy considerations point to a risk that, in deciding the regional distribution of discretionary counter-cyclical measures, a CG may be unduly influenced by factors such as the political alignment of individual sub-national jurisdictions with the center. Even if the CG's countercyclical response takes the form of an increase in non-discretionary transfers, the allocation formula for such transfers across jurisdictions may not take adequately into account asymmetric effects of the shock.

Given the considerations above, we would argue that a more balanced view of the respective roles of CGs and SNGs is called for, especially in federal countries and in unitary ones that are characterized by relatively high degrees of fiscal decentralization. Such a view would center on the following main principles:

- first, it is increasingly crucial to minimize pro-cyclicality in sub-national budgetary policies. This would require SNGs to accommodate the operations of automatic revenue stabilizers, by saving the fiscal dividends of booms and sustaining expenditure levels in the face of cyclical revenue downturns. The case for such "passive" counter-cyclical policies rests on economic, as well as social, reasons. There is substantial empirical evidence (albeit mainly at the CG level)[7] that pro-cyclicality tends to be stronger during upswings than during downswings, with upward ratchet effects on deficits and the public debt. Thus, minimizing pro-cyclicality also helps promote more sustainable fiscal positions over the longer term. Moreover, sharp fluctuations in public expenditure programs tend to have significant efficiency costs. This is evident in the losses generated by delays or cancellation of already initiated sub-national investment projects; but efficiency costs of abrupt changes in funding levels can be also significant for current expenditure programs, e.g., in education and health, which are increasingly a responsibility of sub-national governments. Finally, sharp retrenchments in socially sensitive sub-national spending programs during cyclical downturns can carry substantial social and political costs;

7 See, e.g., Balassone and Kumar (2007).

- second, there may be a case for "active" (discretionary) countercyclical sub-national fiscal measures to respond to regionally differentiated shocks across a national territory, especially if the CG response does not adequately take into account such asymmetries;
- third, it is essential to ensure that sub-national counter-cyclical policies:
  - are consistent with longer-term debt sustainability (see further below)
  - are symmetric over the cycle (*i.e.*, equally restrictive during booms as accommodative during downturns)
  - do not conflict with the fiscal stance of the CG; and
  - do not impose significant adverse externalities on other sub-national jurisdictions;
- fourth, it is important that SNGs build up their capacity to design and implement active countercyclical measures, when appropriate, in a transparent, relatively rapid and reasonably efficient manner, for instance by improving the targeting of their social safety nets, as well as their systems to select and execute public investments. This is the case also for countercyclical measures executed by SNGs on behalf of, and funded by, the CG. SNGs' capacity weaknesses in this respect have often hindered the timeliness and effectiveness of CGs' countercyclical fiscal policies in many countries.

The challenge is to design or reform inter-governmental fiscal arrangements so as to promote sub-national fiscal policies consistent with such principles. Although, of course, such reforms should be tailored to individual countries' economic, political, social and institutional circumstances, a number of steps could help in this area:

- sub-national fiscal rules mandating the running of surpluses during boom periods, to build-up adequate reserves to finance cyclical deficits during downturns. The design of such rules is not a simple matter, especially in view of data limitations that hinder reliable calculations of the cyclical component of sub-national budgets.[8] Nevertheless, approximate indicators, based on estimates of the national cycle, may be better than unadjusted balances to minimize pro-cyclicality in sub-national budgets. As an alternative, a combination of expenditure- and debt-based rules can help promote savings of revenue over-performance during boom periods and facilitate a sustainable countercyclical expansion during downturns;
- the creation, or strengthening, of institutional mechanisms to promote coordination of budgetary policies across government levels (such as exist in Australia, Germany and Spain to name a few). Discussions in such forums could include the coordination of planned sub-national tax measures, to minimize adverse inter-jurisdictional spillovers; and the identification of a pipeline of well-prepared investment projects – to be funded by the CG (or co-financed with SNGs) and implemented by the SNGs – that could be activated quickly as part of a counter-cyclical fiscal stimulus package;
- the (partial or total) assignment to SNGs of revenue bases (such as personal incomes and property) that tend to be relatively less elastic to the cycle. Similarly, the assignment to the CG of responsibility for expenditure programs (such as unemployment insurance) that are especially sensitive to the cycle;
- the introduction of smoothing (e.g., use of a moving average of CG revenues) or other counter-cyclical mechanisms in revenue-sharing formulas;
- strengthened cooperation between national and sub-national tax administrations, (e.g., through use of a common taxpayer identification number; conduct of joint audits; or at least systematic

[8] As a copious literature on fiscal rules (see, e.g., Kumar and Ter-Minassian, 2007; and IMF, 2009) makes clear, the calculation of structural balances is fraught with significant difficulties concerning the estimation of output gaps and elasticities of various budget aggregates to changes in such gaps, as well as to other factors, such as developments in commodities and asset prices. These difficulties are magnified for SNGs by the frequent lack of reliable estimates of potential output at the regional or local level.

exchange of relevant information) to improve monitoring and enforcement of compliance with shared and sub-national taxes during recessions;

- reduction of earmarking and other rigidities hindering an appropriate prioritization of any unavoidable spending cuts by SNGs during downturns;
- the arrangement, on the part of SNGs with market access, of contingent credit lines to be activated during downturns to finance the increased deficits; alternatively, overfunding during boom periods, with the excess balances placed in rainy day funds to be drawn down during recessions. Of course, the financial cost of such strategies should be carefully analyzed and weighed against their benefits in terms of reduction of pro-cyclicality.

Many of these reforms could also contribute to the medium-term fiscal consolidation efforts that will be needed in many advanced and developing countries around the world in the years ahead.

REFERENCES

Afonso, J.R., G. Carvalho and K. Castro (2010), "Desempenho Comparado dos Principais Governos Brasileiros Depois de Dez Anos de LRF".

Bohn, H. and R. Inman (1996),"Balanced-budget Rules and Public Deficits: Evidence from the U.S. States", Carnegie-Rochester conference series on *Public Policy*, No. 45, pp. 13-76.

Balassone, F., D. Franco and S. Zotteri (2007), "Rainy Day Funds: Can They Make a Difference?", Bank of Italy, Occasional Paper, No. 11.

Brondolo, J. (2009), "Collecting Taxes During an Economic Crisis", International Monetary Fund, Staff Position Note, No. 09/17, Washington (D.C.).

Center On Budget and Policy Priorities (2010), "New Fiscal Year Brings More Grief for State Budgets, Putting Economic Recovery at Risk", available at http://www.cbpp.org/cms/index.cfm?fa=view&id=3222

China Ministry of Finance (2009), "Sub-national Government Debt Management in China", presentation made at the *Subnational Fiscal Reform and Debt Management Forum*, World Bank, Washington (D.C.), April 29.

Comisión Económica para América Latina (CEPAL) (2009), "Las Relaciones Fiscales Intergubernamentales y las Finanzas Subnacionales ante la Crisis", paper presented at the conference *Las Políticas Públicas ante la Crisis Global: Problemas Presentes y Desafíos Futuros*, Santiago de Chile, September 29-30.

DEXIA (2009), "Des Collectivités Locales Concernées et Réactives face à la Crise Économique et Financière", press communiqué, Paris, February 12.

Ebel, R.D. and S. Yilmaz (2002), "On the Measurement and Impact of Fiscal Decentralization", World Bank, Policy Research, Working Paper, No. 2809, Washington (D.C.).

European Commission (EC) (2009), "Public Finances in EMU 2009", *European Economy*, No. 5 (provisional version).

Fiscal Affairs Department (FAD) (2010), "Fiscal Monitor: Navigating the Fiscal Challenges Ahead", International Monetary Fund, Washington (D.C.).

Forum of Federations (2009), *Federations and the Economic Crisis*, Special Issue, September/October.

Heller, P. (2005), "Understanding Fiscal Space", International Monetary Fund, Policy Discussion Paper, No. 05/4, Washington (D.C.).

Hemming, R. (2006), "Public-Private Partnerships, Government Guarantees and Fiscal Risk", International Monetary Fund, Fiscal Affairs Department, Special Issues Paper, Washington (D.C.).

Horton, M., M. Kumar and P. Mauro (2009), "The State of Public Finances: A Cross-country Fiscal Monitor", International Monetary Fund, Staff Position Note, No. 09/21, Washington (D.C.).

International Monetary Fund (IMF) (2010), *World Economic Outlook*, Washington (D.C.), April.

—————(2009), "Fiscal Rules – Anchoring Expectations for Sustainable Public Finances", available at www.imf.org/external/np/pp/eng/2009/121609.pdf

Kumar, M. and T. Ter-Minassian (eds.) (2007), *Promoting Fiscal Discipline*, International Monetary Fund, Washington (D.C.).

Munnell, A.H., J.P. Aubry and D. Muldoon (2008), "The Financial Crisis and State/Local Defined Benefit Plans", Center for Retirement Research at Boston College, No. 8-19, November.

Musgrave, R. (1959), *Theory of Public Finance,* New York (NY), McGraw-Hill.

Organization for Economic Cooperation and Development (OECD) (2010), "Sub-central Governments and the Economic Crisis: Impact and Policy Responses", Economics Department, Working Paper, No. 752.