



Fiscal Space: Concept, Measurement, and Policy Implications

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Effective fiscal policy depends on the amount of budget resources available to raise spending or lower taxes without jeopardizing fiscal sustainability. This resource availability is often called fiscal space. Since the global financial crisis, fiscal space in emerging market and developing economies has narrowed. This makes these economies more vulnerable to sudden spikes in financing costs and limits their ability to counteract adverse shocks.

Governments in emerging market and developing economies (EMDEs) are likely to face rising costs of financing deficits and rolling over debt as interest rates increase and global financing conditions tighten with the “normalization” of monetary policy in major advanced economies. Countries with large external liabilities could even suffer sharp movements in capital flows and exchange rates. This would generate financial stability risks and dampen output growth.

In many EMDEs, public sector vulnerabilities to spikes in financing cost have risen since the global financial crisis. On average, public debt levels have increased and sovereign credit quality has deteriorated (Huidrom, Kose, and Ohnsorge 2018; World Bank 2018). This may yet limit the budgetary resources available for governments to stimulate activity and strengthen safety nets to bolster employment during future recessions. At the same time, it may restrict governments’ ability to implement effective fiscal policy as a tool for macroeconomic risk management in the event of severe adverse shocks, such as natural disasters. The availability of such budgetary resources to conduct effective fiscal policy is often called “fiscal space.”

In light of these observations, this policy brief analyzes three issues. It first explains the concept of fiscal space and its measurement. Second, it documents how the concept of fiscal space has evolved over time. Finally, it discusses a set of policies that could help strengthen fiscal space.

To clarify upfront, this policy brief documents the evolution of different aspects of fiscal space in general terms. However, it does not make a judgement call on whether fiscal space is “sufficient” to counter a specific shock. The sufficiency of fiscal space ultimately depends on the likelihood of shocks and their severity, as well as the availability of other policy buffers, such as international reserves, and institutional and policy arrangements, such as capital controls and macroprudential tools. For the same reason, this brief does not aggregate the various aspects of fiscal space measures into a single indicator. Such an aggregate indicator would necessarily require a weighting scheme. Weights, however, would be highly country-specific and time-dependent; their development goes beyond the scope of this brief.

What does “fiscal space” mean?

For the purposes of this policy brief, fiscal space is simply defined as the availability of budgetary resources to conduct effective fiscal policy. Since fiscal space is a complex concept, the literature has used different definitions and measures. For example, some studies define it as the budgetary room to create and allocate funding for a certain purpose without threatening a sovereign’s financial position (Heller 2005; Ley 2009). Some others consider it as an alternative way of expressing a sovereign’s intertemporal budget constraint (Perotti 2007) or as the difference between the current level of public debt and a country-specific debt limit (Ostry et al. 2010; Ghosh et al. 2013; Nerlich and Reuter 2015).

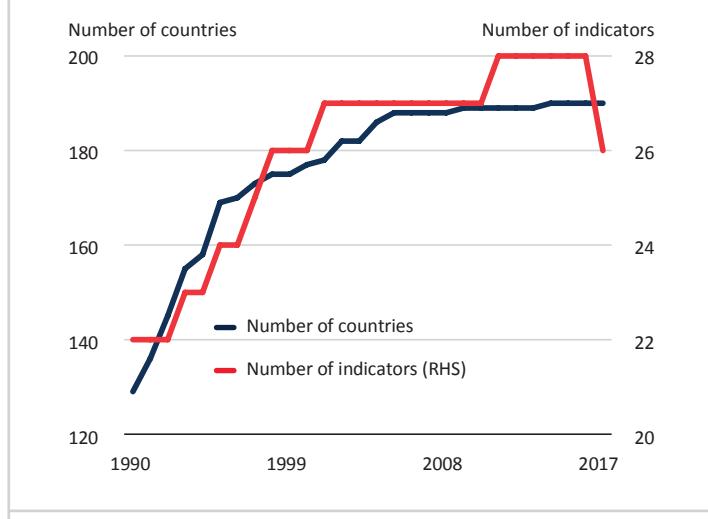
Debt service capacity is a critical component of fiscal space. It has multiple dimensions, including financing needs that are related to budget positions and debt rollover, access to liquid markets, resilience to changes in market valuations of debt, and the coverage of contingent liabilities. While loss of market access and vulnerability to changes in valuation can severely constrain debt service capacity in the short run, persistent deficits and growing contingent liabilities can erode it in the medium to long run.

Multiple aspects of fiscal space can be broadly grouped into four categories: government debt sustainability, balance sheet composition, external and private sector debt, and market perception of sovereign risk. A higher share of nonresident holdings of government debt may imply liquidity risk as well as currency risk in the event of losses of confidence among foreign investors. A higher share of foreign-currency debt could raise exchange rate risk, while a high share of short-term debt could raise rollover risks. The maturity profile of debt is important because debt principal coming due often constitutes an important portion of an economy’s upcoming financing needs, and a bunching of maturities can constrain fiscal space. External and private sector debt could be a source of contingent liabilities.

Market participants’ perceptions of sovereign risk reflect and, in turn, influence an economy’s ability to tap markets and service its obligations. Thus, fiscal space can function as an essential instrument of macroeconomic risk management (World Bank 2013b).

While recent research presents indicators related to some of these four dimensions, no database had systematically brought together different aspects of fiscal space until the release of the cross-country database by Kose et al. (2017). The database covers

Figure 1. Coverage of the comprehensive cross-country database on fiscal space

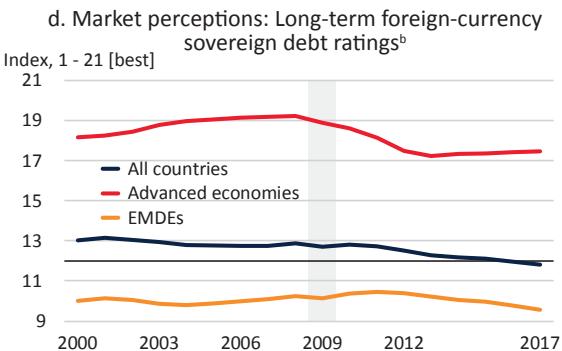
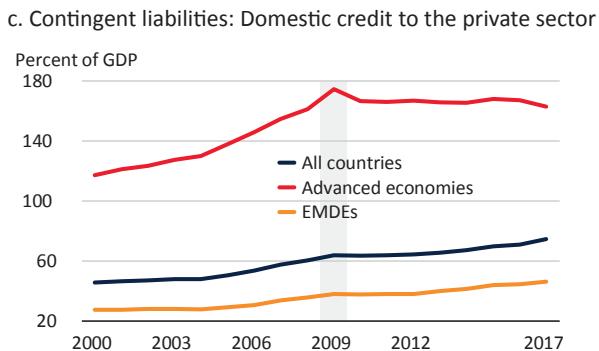
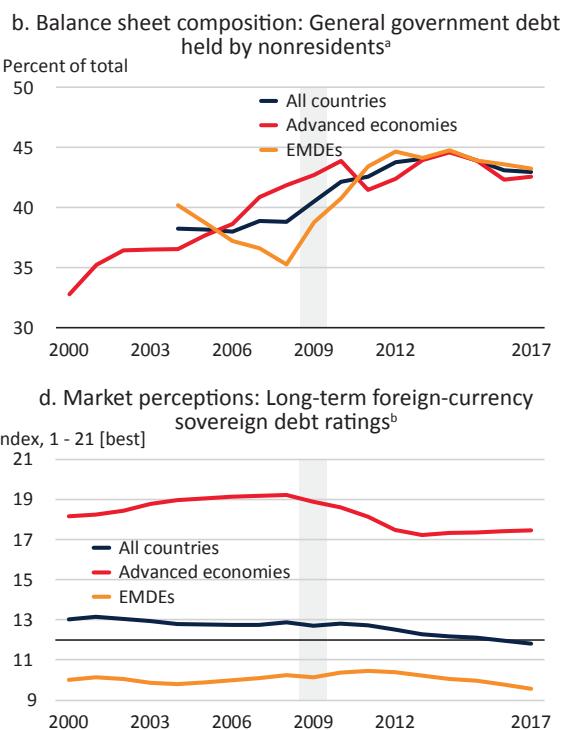
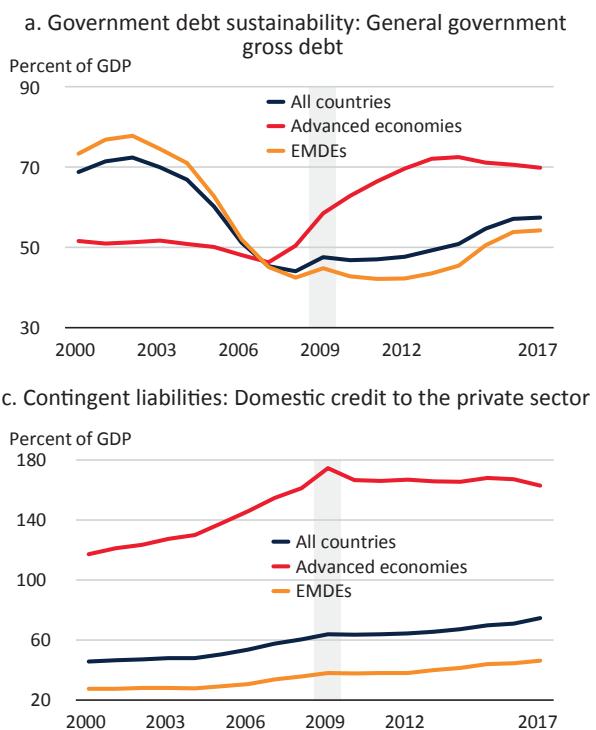


Note: The database is contained in Kose et al. 2017.

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Figure 2. Four measures of fiscal space since 2000



Source: Kose et al. 2017.

Note: Simple averages. The year of global recession (2009) is shaded in gray. One representative indicator from each of the four dimension of fiscal space in Kose et al. (2017) is chosen, partly because of the data availability. However, the overall trend is shared by other indicators in each of four dimensions of fiscal space. Kose et al. (2017) present further details. EMDEs = emerging market and developing economies.

a. Data are not presented in some years because the sample size is smaller than in the other years.

b. The sovereign debt ratings are converted to a numerical scale ranging from 1 to 21 (higher, better rating). The horizontal line at an index value of 12 is the border between investment grade (above the line) and non-investment grade (below the line).

up to 200 economies—41 advanced economies and 159 EMDEs—and is periodically updated to provide a readily available, up-to-date resource to researchers interested in fiscal issues (figure 1). As research questions in this field vary widely, the database is deliberately comprehensive without adding any country-specific features. It focuses on fiscal measures that are most relevant for debt service capacity and that have been extensively discussed in the literature. The latest version of database (updated in May 2018) covers data from 1990 to 2017. In order to ensure data quality, consistency, and comparability across countries, most series are obtained from cross-country sources.

The database covers the four dimensions of fiscal space with 28 indicators: 12 indicators for government debt sustainability; 6 indicators for the balance sheet composition; 8 for external and private sector debt; and 2 for market perception. Cross-indicator correlations support this grouping into four distinct categories. Within each group, the correlations across various individual indicators are considerably larger, on average, than across groups, and many of them are found to be statistically significant.

Government debt sustainability captures the longer-term capacity of the government to finance its obligations. Indicators include general government debt and fiscal balances. Because the sustainability of government debt depends not only on debt and deficits but also on growth and borrowing costs, indicators in this category include measures that compare a country's fiscal balance with the balance that stabilizes government debt at a target level under different assumptions of output growth and long-term interest rates—so-called sustainability gaps (Ley 2009; Escalona 2010). For example, the debt burden generated by sustained fiscal deficits would be easier to service if interest rates are lower and growth is stronger. The sustainability gap indicator provides a simple snapshot of the adjustments that may be needed to reach debt targets under different macroeconomic conditions.

Balance sheet composition—such as by sources of funding, currency structure, and maturity profile—determines exposures to the risks of a sudden change in financial market conditions. Sharp swings in interest rates or exchange rates, or a sudden stop in capital inflows, might undermine liquidity and solvency if government liabilities are heavily exposed to these risks. Indicators in this category include the average maturity of sovereign debt, as well as the share of government debt denominated in foreign currency, held by nonresidents, held on concessional terms, or maturing in 12 months or less.

Contingent liabilities may eventually arise from private sector debt, both domestic and external, if explicitly or implicitly guaranteed by governments. These guarantees would force governments to assume private liabilities in the event of the failure of the borrower (Cebotari 2008). The costs associated with such interventions would rise with the overall size of private sector obligations, and maturity or currency mismatches. For example, one channel through which private obligations generate fiscal costs is the resolution of failing banks. This may include explicit guarantees, nationalization, recapitalizations, and the set-up of asset management companies. In turn, high external debt can lead to private sector stress when private firms are hit by sharp depreciations or asset price collapses because currency mismatches and excessive borrowing can feed into their solvency problems (Hausmann and Panizza 2011). To capture these risks, the database includes total external debt, private external debt, short-term external debt, external debt in foreign currency, and domestic credit to the private sector.

Market perception of sovereign risks reflects an economy's ability to tap markets and service its obligations, and measures investor sentiment about sovereign credit risks and borrowing costs in the market. Indicators in this group include the five-year sovereign credit default swap (CDS) spread and foreign-currency long-term sovereign debt ratings by major international rating agencies.

How has fiscal space evolved over time?

Fiscal space improved during 2000–07, but has shrunk around the world since the global financial crisis. As illustrative examples, figure 2 shows the evolution of a subset of the measures in each of the four dimensions. While the choice of a single measure is presented for illustrative purposes, larger correlations between indicators within each group than between groups suggest that indicators shown in the figure are fairly representative of these dimensions. The improving trend before the crisis was widely shared, as virtually all indicators of fiscal space changed positively in more than half of EMDEs and most indicators improved in more than half of advanced economies in the Kose et al. (2017) dataset. After the crisis, however, debt sustainability indicators, including government debt and fiscal sustainability gaps, have deteriorated in at least three-quarters of countries in the world. External and private debt stocks have also increased in more than half of all countries and perceptions of market participants on sovereign credit risks have worsened.

Before the global financial crisis, government debt sustainability improved significantly in EMDEs, and to a considerably lesser extent in advanced economies, as rapid growth reduced deficits and helped bring debt stocks down. In low-income developing countries, relief initiatives such as the Heavily Indebted Poor Countries Initiative and the Multilateral Debt Relief Initiative helped reduce debt burdens. These improvements contributed to a decline in general government gross debt by 32 percentage points of GDP over 2001–07 in EMDEs, to 45 percent of GDP. Government debt in advanced economies stabilized at about 46 percent of GDP.

In some dimensions, the balance sheet composition of EMDE governments became more resilient before the crisis, but private and external debt grew. In EMDEs, the share of debt held by nonresidents declined by 3 percentage points over 2004–07. By 2007, the external debt-to-GDP ratio was below the levels of the early 2000s in three-quarters of EMDEs, but external debt became increasingly short term. While, on average, still well below that of advanced economies, private credit in EMDEs rose over 2001–07. Sovereign ratings stabilized during the precrisis period.

Box 1. Fiscal space and the effectiveness of fiscal policy

Countries with ample fiscal space can use stimulus measures more extensively to mitigate an adverse impact of global financial stress than those with narrower space. In addition, every dollar of fiscal stimulus implemented by a government with ample fiscal space is more effective at raising output than by a government with limited fiscal space.

The effectiveness of fiscal policy can be evaluated by the fiscal multiplier—a change in output for a dollar increase in government consumption. The more positive the multiplier, the more effective fiscal policy. Recent research finds that the size of multipliers varies significantly, depending on macroeconomic conditions, especially the state of the business cycle, and country characteristics (Auerbach and Gorodnichenko 2013). For EMDEs, multipliers are found to be modest, ranging from -0.4 to 0.9, over the long run (World Bank 2015; Huidrom, Kose, and Ohnsorge 2018).

Fiscal multipliers are positive and significant for low levels of debt, both on impact—in the same quarter as the fiscal stimulus is implemented—and over the longer run (Ilzetzki, Mendoza, and Végh 2013; Huidrom et al. 2016, 2018). For example, the multiplier over the two-year horizon is close to 0.5 when debt is low (there is more fiscal space), but is negative for high levels of debt (there is less fiscal space), as shown in figure B.1. The difference in the estimated multipliers for low and high levels of debt is particularly significant at longer horizons.

Since 2011, fiscal space has shrunk in EMDEs. Partly as a result of steep revenue losses in commodity-exporting EMDEs, sustainability gaps and fiscal deficits widened to 3 to 5 percent of GDP in 2016, on average, with some improvements in 2017. Government debt has risen to 54 percent of GDP, on average, in 2017. It now exceeds 2000 levels in more than one-third of EMDEs and has increasingly been held by non-residents.

External and private sector debt have increased from 2007 levels in the majority of EMDEs. A rapid increase in private sector credit, especially for corporates, since the global financial crisis has been accompanied by weaker solvency and profitability (Alfaro et al. 2017; World Bank 2018). Reflecting deteriorating debt sustainability, balance sheet risks and credit ratings of EMDEs have (marginally) worsened on average.

How can fiscal space be improved?

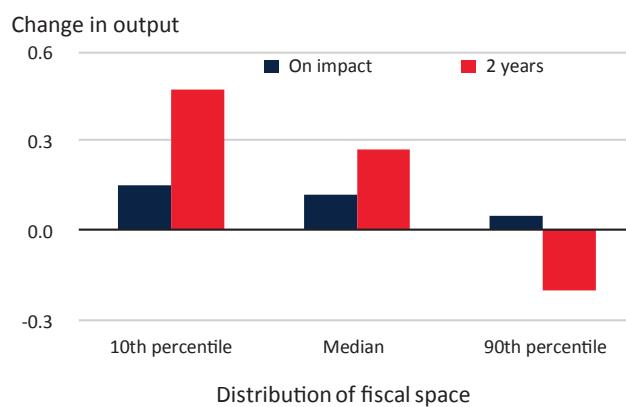
Policies

Fiscal space is critical in managing aggregate demand (box 1) and as a tool of macroeconomic risk management in the event of adverse shocks such as natural disasters or bouts of violence. Hence, policy measures to shore up fiscal sustainability have become a priority as fiscal space has deteriorated since the global financial crisis.

Fiscal sustainability could be improved by increasing the efficiency of revenue collection and spending. Measures to strengthen revenue collection could include broadening tax bases to remove loopholes for higher-income households or profitable corporates. In countries with high levels of informality, taxing the informal sector—for example, by promoting a change in payment methods to non-cash transaction and facilitating collective action by informal sector associations—could help raise revenues directly, as well as indirectly, by encouraging informal firms to join the formal sector with better growth prospects (Joshi, Prichard, and Heady 2014; Awasthi and Engelschalk 2018). In EMDEs, reforms to broaden revenue bases and strengthen tax administration can generate revenue gains (Akitoby 2018).

On the spending side, governments can consider shifting the reallocation of expenditures away from less efficient expenditures toward more growth-enhancing or better-targeted ones, such as

Figure B.1. How fiscal space affects fiscal multipliers



Source: Huidrom et al. 2018.

Note: The figure shows the conditional median fiscal multipliers, on impact (at the moment when a change in government consumption takes place) and over the two-year horizon, in the 10th, 50th (median), and 90th percentiles of a distribution of fiscal space, represented by government debt as a share of GDP. The corresponding debt-to-GDP ratios are 17 percent of GDP (10th percentile), 45 percent of GDP (median), and 92 percent of GDP (90th percentile). Therefore, fiscal space is ample (narrow) when government debt is low (high). These are based on estimates from an interacted panel vector autoregressive model, where model coefficients are conditioned only on fiscal space.

investment or means-tested income support. Increases in the spending composition of infrastructure and education projects could have long-term gains in the economy (Gemmell, Kneller, and Sanz 2016). Pension reforms could also support fiscal credibility and generate long-term fiscal gains with limited short-term impact on growth.

Instruments

In addition, credible and well-designed institutional mechanisms can help support fiscal discipline and strengthen fiscal space. Three arrangements have been widely introduced: fiscal rules, stabilization funds, and medium-term expenditure frameworks.

Fiscal rules impose numerical constraints on budgetary aggregates—debt, overall balance, expenditures, or revenues. Rules often allow for flexibility in meeting budget targets by taking into account temporary cyclical deviations, such as a large output gap, or structural adjustments, such as changes in the medium-term price of a key export. Fiscal rules, and in particular cyclically adjusted or structural balance rules, have become increasingly popular in EMDEs, especially since the global financial crisis (Schaechter et al. 2012). Implementation of balanced budget rules can be improved by a well-designed framework, a simple enforcement structure without any off-budget government guarantees, flexibility, transparency, and support by surveillance arrangements. Compliance with fiscal rules can be monitored by fiscal councils (Debrun and Kinda 2017). Chile's use of a technical fiscal council and fiscal rule that targets fixed structural balance is a good example of a well-designed, credible, and successfully operated fiscal rule.

Stabilization funds set aside receipts from natural resource revenues. Amounts saved during favorable times are released to cushion potential revenue shortfalls and to mitigate negative shocks to government expenditures. Funds were adopted widely in the 2000s, when high oil prices, along with the discovery of oil in a number of EMDEs, facilitated their establishment. Many stabilization funds are integrated with the budget, with clear rules to guide the accumulation and withdrawal of fund resources. The effective use of stabilization funds requires government commitment to fiscal discipline and macroeconomic management (Gill et al. 2014). Proper

designs and strong institutional environments that support their operations are crucial factors for their success, as in the cases of Norway and Chile (Schmidt-Hebbel 2012; Stone and Truman 2016).

Medium-term expenditure frameworks are intended to establish or improve credibility in the budgetary process. The frameworks seek to ensure a transparent budgetary process, where government agencies allocate public resources based on strategic priorities. Robust implementation is closely related to linkages with broader economic and social policy objectives and the forecasting capability based on reliable data (Allen et al. 2017). In South Africa, the framework was introduced in the context of high government debt and a combination of underspending by the central government and overspending by provincial governments. Underspending and overspending were both reduced following the introduction of the medium-term framework (World Bank 2013a).

Conclusion

Amid tightening global financing conditions, EMDEs need to shore up fiscal positions to prevent sudden spikes in financing costs from forcing them into fiscal tightening. They need to maintain budgetary resources to counteract such cyclical downturns or unexpected shocks as natural disasters and heightened risks of violence. The availability of budgetary resources to implement effective fiscal policy is often loosely called fiscal space. Fiscal space is a complex and multi-dimensional concept, and therefore, needs to be captured from different directions.

The comprehensive, cross-country database introduced by Kose et al. (2017) includes 28 indicators related to fiscal space, which are grouped into four broad categories: government debt sustainability, balance sheet composition, external and private sector debt, and market perception of sovereign risk. Because each of these categories covers a different dimension of fiscal space, the database serves researchers interested in a wide range of fiscal issues.

Fiscal space has been shrinking in EMDEs since the global financial crisis. It needs to be strengthened. This requires well-designed policy frameworks with clear and broad objectives and, most importantly, strong commitments of policy makers in each country.

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