
Fiscal Policy for the Twenty-First Century: Testing the Limits of the Tax State?

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Public finance and fiscal policy are in search of a new paradigm. Richard Musgrave's threefold classification of public finance functions—allocation, distribution, and stabilization—is showing signs of wear and tear, after a half century. Similarly, the later paradigm whereby government intervention is justified on the basis of market failure is also showing signs of fatigue. Assumptions necessary for market efficiency are unlikely to hold in the real world. We now know that market failure is pervasive and so does not provide much clarity about when governments should or should not intervene. Clearly, full symmetric information, complete markets, an absence of externalities, perfect competition, and an absence of transaction costs do not prevail in the real world. And this list does not include human behavioral flaws, which further contribute to market failures: limited computation capacity, myopia, envy, greed, fear, and much else. From Immanuel Kant's famous saying, "Out of the crooked timber of mankind no straight thing was ever made," it follows that possible failures of government intervention must be taken into account as well. As Brad DeLong put it in his contribution, "We know that as bad as market failures can be, government failures can often be little if any less immense."

But conceptual questions run deeper. What are the areas where government intervention serves the interests of society better than private arrangements? How can public-sector organizations be designed so that they provide public-sector agents with the means and incentives to deliver what they are set up to do? How can accountability be pursued? How can governments and markets co-evolve so as to serve the interests of the people? These are only a few of the many questions that remain unanswered.

At this point, there does not seem to be an alternative emerging paradigm. The public finance field has been prolific in looking at a number of areas where the state does or should intervene:

- macroeconomic stability and growth,
- the provision of basic public services,
- the provision of a social safety net,
- equitable distribution,
- market regulation and competition, and
- insurance against catastrophic risks.

This list oversimplifies the field. For example, I have not mentioned international aspects. To assess the importance of the omission, we need only recall global warming and the euro area.

A critical dimension in the analysis of public finances, however, is the means that the state uses to finance such interventions. Max Weber famously defined the state as any human community that has successfully ensured a monopoly over the legitimate use of violence. Schumpeter underscored another crucial characteristic of the modern state: its reliance on taxation. The tax state can be analogously defined as a political organization that relies on compulsory mobilization of private-sector resources to finance its multiple activities.

However, the state's ability to tax in order to sustain expanding budgets is increasingly under pressure in the twenty-first century. Public finances are being shaped by evolutionary dynamics such as globalization, technological change, demographic transitions, regional integration, and much else. Shocks expose further limits to the state's ability to react. Hence, a big encompassing question was asked by Schumpeter almost one hundred years ago: *What are the limits of the tax state?*

Answering such a profound question is beyond the scope of this chapter. Going forward, the IMF's Fiscal Affairs Department will certainly be tackling aspects of this question as part of its work agenda. This will include, for example, an IMF policy paper on fiscal anchors and policy frameworks to be issued in 2016.

In the remainder of this chapter I will focus on aspects related to public finance and macroeconomic stability and growth, the first issue listed above. I will center my discussion on two questions. First, how can fiscal policy be designed to minimize the likelihood and the effects of possible

future economic and financial disasters? Second, how can fiscal policy, following a rules-like course of action, contribute to macroeconomic stability and economic growth?

Managing Public Finance Risks

Government debt is, in advanced economies, at unprecedented levels in peacetime. Moreover, it is clear that government debt affords only a partial view of public finances. In isolation it can be misleading. Wider risks to public finances are today sizable and manifold. Clear and present risks arise from low growth and inflation in some advanced economies. Developing economies face pressures from adverse changes in exchange rates and financing conditions. Volatile commodity prices hurt commodity exporters. In the context of diverging monetary policies across major economies, there is the risk of sudden jumps in interest rate growth differentials, which could jeopardize debt sustainability. Furthermore, shifting demographic trends pose serious challenges for fiscal policymakers in all countries. Contingent liabilities arising from struggling banks and troubled public enterprises pose additional sources of risk, often materializing when macro fundamentals are weak. Moreover, when an adequate institutional setup is lacking, these contingent liabilities can be difficult to limit *ex ante* because the state typically serves as the insurer of last resort whenever something goes wrong in the economy. Once realized, these risks can quickly spill over into regional and even global crises.¹

In this context of high debt and latent risks, several key policy questions come to the fore. How can public finances be made safe in a world full of risks? How can these risks be usefully estimated and analyzed? How can fiscal policy contribute to mitigating those risks and promoting more sustainable and inclusive growth?

Most frameworks used to analyze fiscal risks rely, explicitly or implicitly, on a number of unexamined assumptions concerning the behavior and relevance of those risks. Specifically, they assume that fiscal risks are *independent* (the realization of one risk does not make the realization of any other risk more or less likely), *symmetric* (positive and negative shocks to the public finances are equally likely and equally beneficial or costly), and *linear* (the costs and benefits increase in proportion with the size of the underlying disturbance).

The global crisis provided a costly lesson on the limitations of such assumptions. It reminded us that, in fact:

1. *Fiscal risks are highly correlated.* When it comes to public finances, bad news really does “come in threes.” Figure 17.1 illustrates the perfect storm of fiscal shocks for the ten countries hardest hit by the crisis. Not only were there multiple sources of increases in debt, these were also systematically linked: undisclosed general government deficits; adverse macroeconomic developments; contingent liabilities to the financial sector, state-owned enterprises, and private-public partnerships; and the government’s own discretionary policy response to the crisis.
2. *Fiscal risks are asymmetric.* Politicians are quick to “bank” upside risks to their fiscal forecasts and are prone to downplay or overlook downside risks. Nowhere is this more evident than in the way

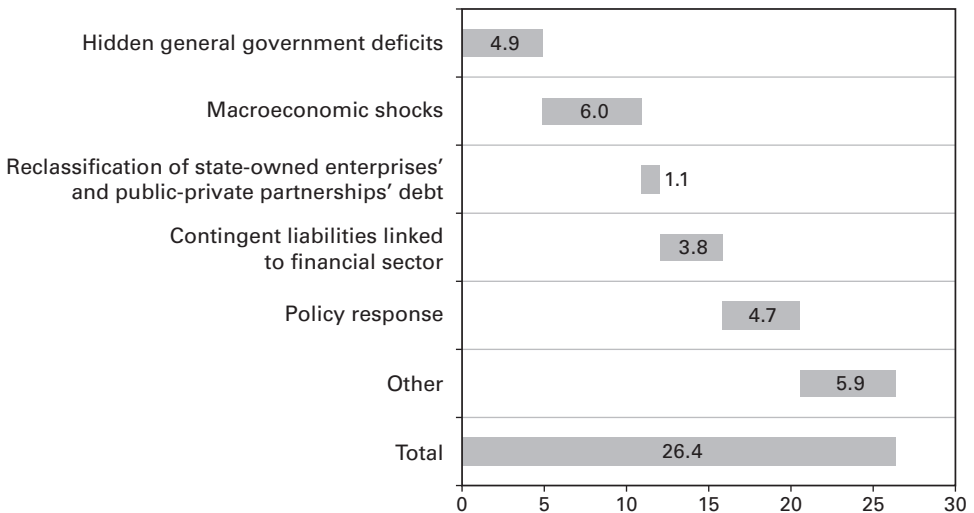


Figure 17.1

Unexpected Increase in General Government Debt in Selected Countries (2007–2010, percent of 2010 GDP).

Note: PPP-GDP weighted average across ten countries with largest increase in general government gross debt-to-GDP ratio during 2007–2010. Includes France, Germany, Greece, Iceland, Ireland, Netherlands, Spain, Portugal, UK, and the United States. *Source:* International Monetary Fund, “Fiscal Transparency, Accountability, and Risk,” IMF Policy Paper, Washington, DC, 2012.

countries treat contingent assets and liabilities. Government forecasts often include revenues from future asset sales to reduce borrowing requirements, even though the precise amount or timing of the sale is uncertain. By contrast, governments typically exclude contingent liabilities, such as guarantees, because it is uncertain whether or when they will be called. The result is a forecast in which the balance of risks is skewed, with downside risks consistently understated. Figure 17.2 illustrates the optimistic bias by EU countries in forecasting government debt over the last twelve years. Positive skewness and kurtosis in the distribution of fiscal shocks justify prudent fiscal policy in “normal” times.

3. *Fiscal risks are nonlinear.* For small disturbances it is reasonable to assume that costs increase in proportion to the size of the disturbance. However, in extreme events, the associated financial, economic, social, and political consequences can be much greater. Once markets

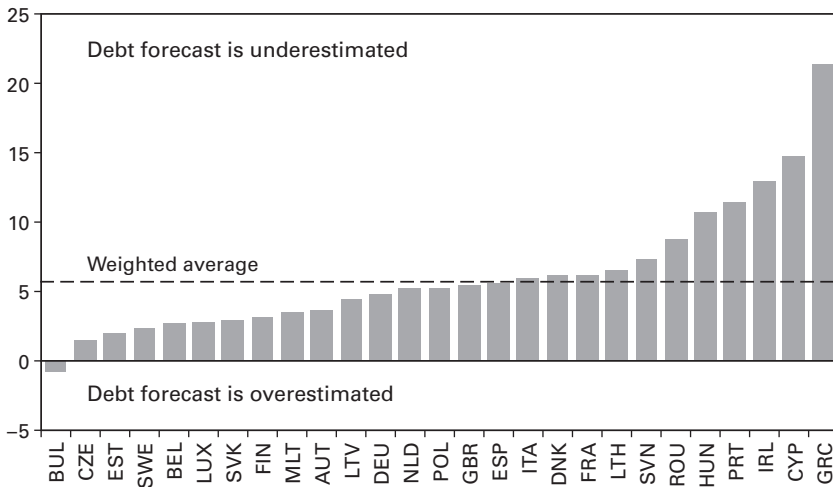


Figure 17.2
 Forecast Error for General Government Debt (actual minus forecast for year $t + 2$, 2001–2013 average as percent of GDP).
Note: The chart presents annual forecast errors averaged between 2001 and 2013. Forecast errors are calculated as the actual outcome for debt-to-GDP ratio minus the forecast for the debt-to-GDP ratio prepared two years earlier. Includes all EU member-states except Croatia because of data availability. *Sources:* EU Stability and Convergence Programmes; IMF staff estimates.

perceive government debt to be unsustainable, spiraling interest rates and depreciating exchange rates can ensue. In some cases, countries may suffer a “sudden stop,” simply cut off from market access. This nonlinear relationship between economic shocks and their consequences can give rise to what Olivier Blanchard calls “dark corners,” situations in which the economy can malfunction badly.² Specifically in this context, important nonlinearities may be associated with public debt overhangs and the possibility of multiple equilibria. Both examples are well illustrated by recent examples in the euro area.

The combination of high debt levels with fiscal risks that are highly correlated, asymmetric, and nonlinear demands a new approach to fiscal policymaking, one in which fiscal risk analysis actively informs the most important fiscal decisions.

The IMF has already taken some important steps to improve and inform fiscal risk analysis among its members. A number of tools are already in place, including the fan charts in the IMF’s debt sustainability analyses,³ heat maps in fiscal transparency evaluations,⁴ and work on future liabilities from age-related spending.

Going forward, we will consider how to better measure, prevent, and minimize fiscal risks by taking into account their correlated, asymmetric, and nonlinear characteristics. We will also explore how to mainstream fiscal risk assessments into fiscal decision making. This analysis will be part of a comprehensive approach to fiscal policymaking that also provides guidance on setting appropriate medium-term fiscal objectives that balance inclusive growth, stability, and risk management—a balancing act especially important in a monetary union, as underscored by Marco Buti in his contribution to the symposium. It will also take into account the role of fiscal policy in building resilience and supporting growth, in both the short and the medium term. As emphasized by Martin Feldstein in his contribution, fiscal policy plays a crucial role, particularly when economic downturns are expected to be deep and longlasting, as fiscal incentives can support private investment with lower associated risks than unconventional monetary policy. For policy authorities facing binding constraints, Feldstein also considers the possibility of revenue-neutral tax policy as an effective alternative to support investment.

Automatic Stabilization, Macroeconomic Stability, and Growth: The Power of FISCO

Does fiscal policy respond systematically to economic activity? Can fiscal policy promote macroeconomic stability? Does greater stability support stronger growth? The answer is yes on all counts, as suggested by our recent analysis in the April 2015 *Fiscal Monitor*.⁵

To measure whether fiscal policy contributes to stability, we introduce the novel concept of the fiscal stabilization coefficient (FISCO). FISCO measures how much a country’s overall budget balance changes in response to a change in economic slack (as measured by the output gap). If FISCO is equal to 1, it means that when output falls below potential by 1 percent of GDP, the overall balance worsens by the same percentage of GDP. The higher FISCO, the more countercyclical is the conduct of fiscal policy, whereby governments build fiscal buffers in good times that they can then rely on during bad times. The average FISCO is 0.7 among advanced economies and 0.3 among emerging and developing economies (figure 17.3), with considerable cross-country differences (figure 17.4).

FISCO takes into account the fact that many revenue and expenditure items respond to the state of the economy even though the underlying

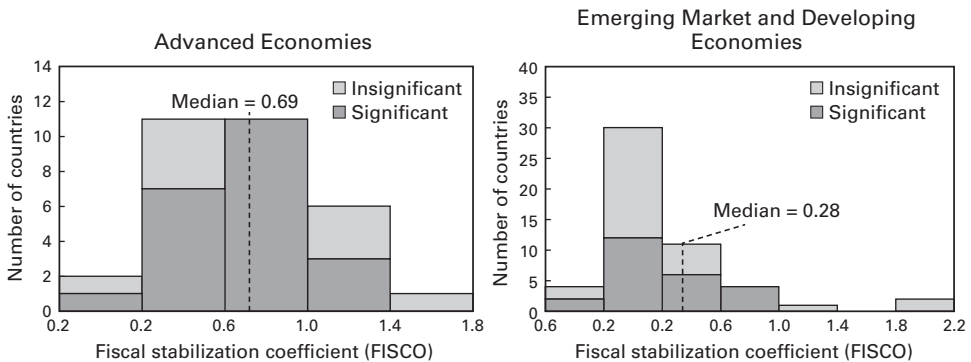


Figure 17.3
 Distribution of Fiscal Stabilization Coefficients.
 Note: “Significant” is defined as a coefficient with a P value less than 0.10. Source: IMF, *Fiscal Monitor*, “Now is the Time: Fiscal Policies for Sustainable Growth,” April 2015.

provisions or programs were primarily designed for other reasons. Monitoring the relationship between the budget balance and the output gap would help policymakers understand how much their action contributes to output stability, including in comparison to other countries.

With FISCO, we assess the effect that fiscal policy can have on medium-term growth through its support of macroeconomic stability. Findings suggest that countries that can improve their FISCO would be able to significantly reduce macroeconomic volatility (figure 17.5).

Why is this important? First, lower macroeconomic volatility helps avoid wasteful fluctuations in employment and growth. Second, lower macroeconomic uncertainty provides a favorable environment for physical and social capital accumulation, thereby boosting medium-term growth.

The results further suggest that making fiscal policy more stabilizing would support growth, as illustrated in figure 17.5. The effect can be significant. Take, for example, the case of an advanced economy that raises

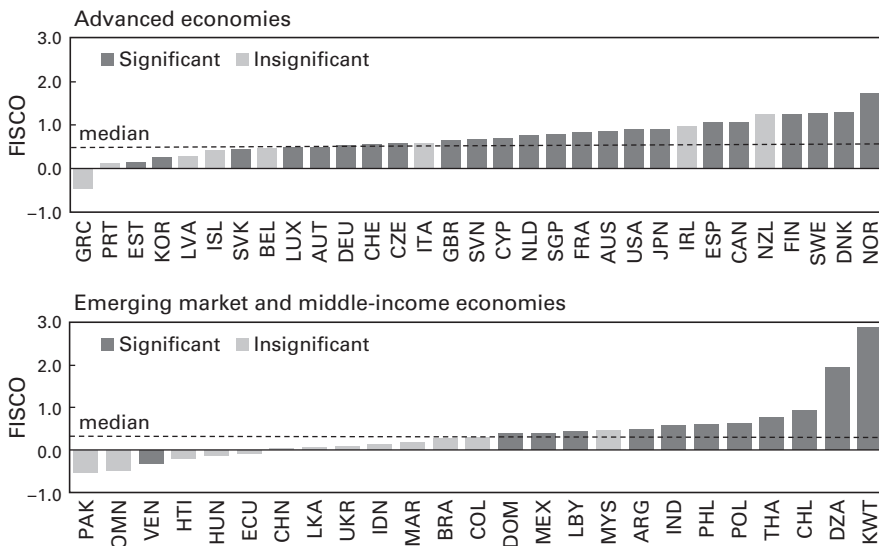


Figure 17.4

Selected Fiscal Stabilization Coefficients (FISCO).

Note: “Significant” is defined as a coefficient with a P value less than 0.10. Source: IMF, *Fiscal Monitor*, “Now is the Time: Fiscal Policies for Sustainable Growth,” April 2015.

its FISCO from the average level (0.7) to that in the top third of countries (about 0.8). This would reduce output volatility by about 15 percent, which in turn would bring about a growth dividend of 0.3 percentage points annually. Note, however, that a 0.1 improvement in FISCO implies considerable reform efforts.

The effects on growth come from growth regressions. As is well known in the economic literature, growth regressions need to address the problems of joint endogeneity. The April 2015 *Fiscal Monitor* provides greater details of the methodology underlying this estimate, which attempts to address these well-known challenges. Still, as with all econometric findings, these results must be interpreted with caution.

We also find evidence that fiscal stabilization policies are asymmetric through the business cycle. Countries tend to deliver fiscal stabilization during cyclical downturns. But during expansions, fiscal policy changes seem to (partially) offset the work of automatic stabilizers. The simulation in figure 17.6 illustrates that a systematic asymmetric response whereby half of cyclical revenues windfalls is spent during good times, while the deficit fully absorbs the shortfalls in bad times, would be associated with a visible upward drift in the debt-to-GDP ratio.

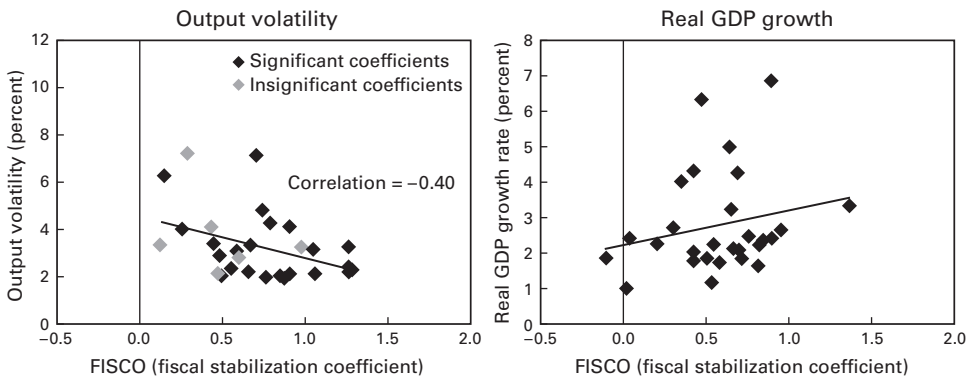


Figure 17.5

Advanced Economies: FISCO, Output Volatility and Real GDP Growth, 1980–2013.

Note: Output volatility is defined as the standard deviation of the real GDP growth rate over the sample period. *Source:* IMF, *Fiscal Monitor*, “Now Is the Time: Fiscal Policies for Sustainable Growth,” April 2015.

What can countries do to improve fiscal stabilization? As argued above, it is crucial to have in place a fiscal framework to manage public finance risks. Well-designed fiscal rules and medium-term frameworks can also help by enabling uninterrupted access to borrowing at favorable conditions, ensuring expenditure control over the entire cycle and leaving flexibility to respond to output shocks.

Another important aspect of fiscal frameworks is to induce ruleslike, automatic stabilizing responses to economic developments. I will outline a few for illustration.

- Tax payments that move in sync with income, and social transfers, such as unemployment benefits, can automatically boost aggregate demand during downturns and moderate it during upswings. They

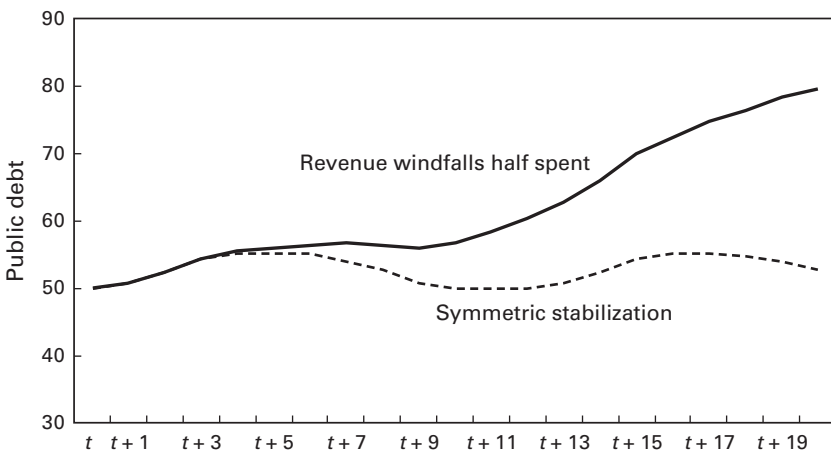


Figure 17.6

Asymmetric Stabilization: Unpleasant Public Debt Arithmetic (percent of GDP).

Note: The simulations are based on the stock flow identity between debt and the overall balance. Other assumptions are nominal potential growth of 4 percent, an automatic stabilization coefficient of 0.5, an implicit interest rate on public debt of 5 percent, and symmetric cycles, with the output gap smoothly oscillating between -2 and 2 percent. No fiscal adjustment is built into the scenario. The t denotes the initial year of the simulation. *Source:* IMF staff estimates.

are a very effective way to make fiscal policy stabilizing because they operate in real time, without political approval or implementation lags.

- Automatic tax deductions during recessions can be stabilizing because they reduce the cost of capital and ease credit constraints. This in turn helps stimulate investment. In Sweden, these served as countercyclical fiscal measures between the mid-1950s and the mid-1970s.
- Cyclical loss-carry backward is a measure that allows the deduction of corporate tax losses against past profits and provides companies immediate tax refunds during recessions. It has been applied in Canada, France, Germany, the UK, and the United States.

Although the peak of the global financial crisis now seems distant, we are left with its difficult legacies, namely, the disappointing growth outlook across most regions and fragile fiscal positions in many countries. The main challenge for public finances in the twenty-first century is therefore to support sustainable and inclusive growth, mindful of the limits to the tax state, in order to avoid sowing the seeds of the next crisis.

Notes

1. This section draws on joint work with Richard Hughes and Laura Jaramillo that appeared on the blog *Dams and Dykes for Public Finances*, March 18, 2015, <http://blog-imfdirect.imf.org/2015/03/18/dams-and-dikes-for-public-finances>.
2. See Olivier Blanchard, “Where Danger Lurks,” *Finance & Development* 51, no. 3 (2014).
3. See the template for the IMF’s “Debt Sustainability Analysis for Market-Access Countries,” IMF, June 15, 2015, <https://www.imf.org/external/pubs/ft/dsa/mac.htm>.
4. See the IMF’s published fiscal transparency evaluations at <http://www.imf.org/external/np/fad/trans>.
5. The IMF’s April 2015 *Fiscal Monitor*, “Now is the Time: Fiscal Policies for Sustainable Growth,” is available at <http://www.imf.org/external/pubs/ft/fm/2015/01/fmindex.htm>.

