Aggressive austerity was always likely to be hugely damaging, or even self-defeating, in the euro-area periphery

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Dynamic Fiscal Multipliers: Why Austerity Has Failed in the Euro Area

Our research shows that successful fiscal adjustment depends on several clearly identifiable factors. These factors were never present in the euro area, which is why fiscal tightening has been so corrosive. Europe's leaders urgently need a new approach before public sentiment turns against the euro.

Introduction

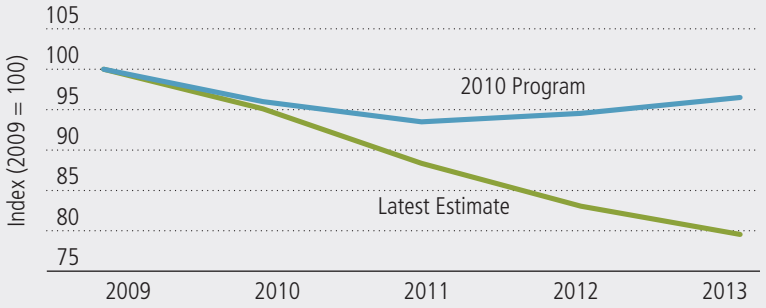
The pressing need to address high levels of public-sector debt on both sides of the Atlantic has prompted a renewed interest in fiscal multipliers—the impact that policy-driven changes in taxation and government spending have on economic output. There is good reason for this. If the multiplier is low (or negative, as some have postulated), there are obvious benefits to tightening fiscal policy early and aggressively. But if the multiplier is high, a tightening of fiscal policy is likely to have a hugely damaging impact on output and might even be self-defeating. In such a case, it would be better to delay austerity until the economy has recovered.

Nowhere is the debate about the size of fiscal multipliers more heated than in the euro area. When the troika—the International Monetary Fund (IMF), European Commission (EC) and European Central Bank (ECB)—designed a rescue package for Greece in May 2010, the aggressive fiscal tightening underpinning the program was based on the assumption that the multiplier was likely to be low (0.5, according to a recent IMF paper[1]). Based on this, official projections showed the economy contracting by a cumulative 7% in 2010 and 2011, before recovering in 2012. The unemployment rate was expected to peak at 14.5%.

Reality has been rather different. The economy has contracted by 16% over the last three years and is expected to shrink again this year (*Display 1*). Against this backdrop, the unemployment rate has overshot expectations by a huge margin—it currently stands at 26.4%—and fiscal performance has been poor.

Display 1: Massive Program Failure in Greece

Greece: Real GDP



As of January 18, 2013
Historical analysis and current estimates do not guarantee future results.
Source: International Monetary Fund

[1]*A fiscal multiplier of 0.5 means that a reduction in government spending or increase in taxation equal to 1% of GDP would reduce the level of economic output by 0.5%. For a discussion of the assumptions underpinning the Greek and other adjustment programs, see Olivier Blanchard and Daniel Leigh, "Growth Forecast Errors and Fiscal Multipliers," IMF Working Paper No. 13/1 (January 2013).*

**Summer 2012*

Even after two sovereign-debt restructurings, public-sector debt is expected to peak at 176% of gross domestic product (GDP), compared with 149% in the original program.

With the Greek economy in tatters, and disappointing results elsewhere, many observers have started to question the troika's original assumptions. Indeed, even the IMF now admits that it may have underestimated the size of fiscal multipliers in the euro area.[2]

Nonetheless, we think much of the debate on fiscal multipliers is misguided. All else being equal, higher taxes and lower government spending are always likely to have a negative short-term impact on output. But all else is rarely equal. When trying to gauge the impact of fiscal tightening, other factors need to be taken into account. The key is to identify variables likely to affect the size of the multiplier and, hence, influence the success or failure of an adjustment program. This can help policymakers decide when it is rational to tighten fiscal policy or when delay might be more prudent.

A New Approach

The IMF took an important step in this direction in July 2011, when it published a paper[3] advocating a new approach to the measurement of fiscal tightening. Traditionally, economists have tried to capture the size of fiscal adjustments by calculating changes in cyclically adjusted primary budget balances (CAPBs). But CAPBs suffer from several flaws that can distort the size of these estimates.[4] The authors therefore took a different approach: they identified 173 cases of fiscal consolidation over the last 35 years and used historical documents, such as budget speeches and IMF staff reports, to determine the amount of tightening that actually took place.

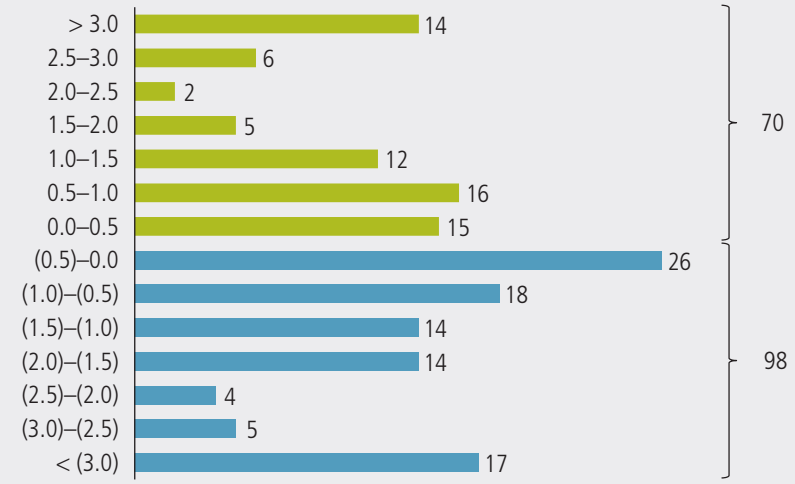
On average, the authors found that a fiscal tightening worth 1.0% of GDP reduced the level of output by 0.6% over the next two years. This is similar to the assumption used in the original Greek program and not particularly revealing. However, what the paper did discover is that fiscal policy has, in the past, been associated with a vast array of possible outcomes.

To help explain this, we used the IMF dataset to calculate individual fiscal multipliers for 168 of the 173 episodes identified in the July 2011 paper. In most cases (98 versus 70), we found that fiscal consolidation was associated with negative economic outcomes. In line with this, our aggregate result showed that a fiscal tightening worth 1.0% of GDP reduced the level of output by 0.4% over the next two years. However, the range of individual results varied from heavily contractionary to highly expansionary (*Display 2*). In other words, fiscal multipliers have, in the past, been both positive and negative, with a wide range of possible magnitudes.

So what can explain these differences? Using the individual fiscal multipliers derived from the IMF dataset, we tested a number of economic and financial variables to determine whether or not they helped explain the magnitude of the fiscal multiplier. The most significant variables, according to our analysis, are shown in *Display 3*.

Display 2: Huge Variation in Outcomes when Fiscal Policy Has Been Tightened*

168 Historical Cases of Fiscal Tightening



As of March 8, 2013
Historical analysis and current estimates do not guarantee future results.
*Impact of a fiscal tightening worth 1% of GDP on the level of economic output after two years. The bars show the number of individual observations falling into each category.
Source: AllianceBernstein

[2]*See, for example, Olivier Blanchard and Daniel Leigh, "Growth Forecast Errors and Fiscal Multipliers," IMF Working Paper No. 13/1 (January 2013).*
[3]*Jaime Guajardo, Daniel Leigh and Andrea Pescatori, "Expansionary Austerity: New International Evidence," IMF Working Paper No. 11/158 (July 2011).*
[4]*The CAPB is the budget balance net of interest payments, adjusted for the position of the economy in the business cycle. Its accuracy is dependent on being able to correctly determine where the economy is in the cycle and then being able to gauge the sensitivity of government revenues and expenditures to cyclical variations. As both are uncertain, the CAPB is prone to large measurement errors.*

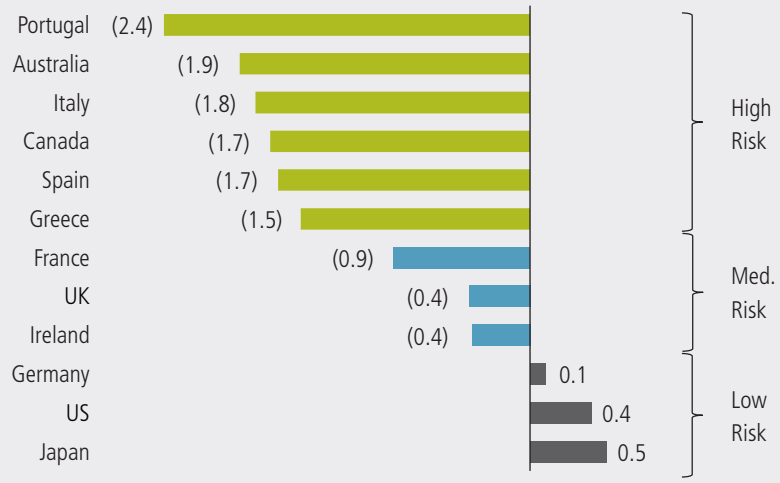
Display 3: Factors Influencing the Likely Success/Failure of a Fiscal Consolidation

	Importance*
Fiscal Factors	
Size of the adjustment	High
Duration of the adjustment	Medium
Initial size of the budget deficit	High
External Factors	
Starting level of the real exchange rate	Very High
Change in the nominal exchange rate	High
Openness of the economy	High
Domestic Factors	
Credit growth	High
Investment share in GDP	Medium

As of March 8, 2013
*Relative importance in helping to explain the size of fiscal multipliers during 168 past consolidation phases.
Source: AllianceBernstein

Display 4: Who's at Risk?

Predicted Impact of a Fiscal Tightening Worth 1% of GDP on the Level of Economic Output After Two Years



As of March 8, 2013
Current estimates do not guarantee future results.
Source: AllianceBernstein

Key Variables

Broadly speaking, we can split the variables into three groups: fiscal factors, external factors and domestic factors. Some of the variables are worth commenting on in greater detail.

One of our key findings is that the magnitude of a fiscal adjustment has an impact on the size of the multiplier. What we mean by this is not just that large adjustments have a bigger impact than small adjustments, but that the impact of an adjustment is magnified as its size increases (i.e., fiscal tightening is nonlinear[5]). We also found that the duration of an adjustment matters: a tightening of fiscal policy is likely to have a bigger negative impact on output if it has been preceded by one or more years of consolidation.[6] Both findings will be important when we come to consider the large, multiyear adjustment programs currently taking place in the euro area.

Our analysis also suggests that the starting budgetary position is important. Austerity is likely to be less destructive, or even expansionary, when fiscal deficits and solvency risks are high. Correcting the imbalance helps stabilize the economy, provides scope for lower interest rates and may even encourage consumption (by lowering the expected future tax burden).

Turning to external factors, we found that the level of the real exchange rate at the beginning of the adjustment and the change in the nominal exchange rate during the adjustment are both highly significant. This is consistent with other studies highlighting the important role exchange rates play in helping to offset the deflationary impact from tighter fiscal policy. It is less clear why both variables show up. However, we think it

[5]Our analysis suggests that a fiscal tightening worth 2% of GDP would have a bigger impact than would be assumed by doubling the effect of a tightening worth 1% of GDP.
[6]This might reflect the fact that earlier fiscal tightening had already weakened the economy. If so, this would be consistent with recent research showing that the fiscal multiplier tends to be larger in economic downturns than during economic expansions. See, for example, Anja Baum, Marcos Poplawski-Ribeiro and Anke Weber, "Fiscal Multipliers and the State of the Economy," IMF Working Paper No. 12/286 (December 2012).

may be because the offsetting exchange-rate adjustment has often taken place before the fiscal consolidation rather than during it.

We also found that an economy's openness to international trade is important. This is probably because a high export share helps maximize the gain from a depreciating exchange rate, while a high import share reduces the impact from austerity by directing it toward overseas producers.

Perhaps surprisingly, we could not find a key role for interest rates in helping to explain the size of fiscal multipliers. But we did discover an important role for credit growth. This makes the model particularly useful today, as the monetary-transmission mechanism is broken in many euro-area countries (which means that interest rates may not be a good guide to the tightness or looseness of monetary conditions).

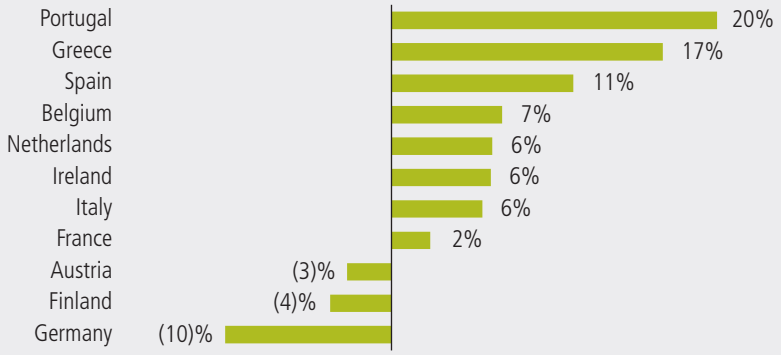
Lessons for Today

So what does our analysis tell us about the fiscal experiment currently being conducted in the euro area? To provide insight, we built a model to simulate the impact that a fiscal tightening worth 1.0% of GDP would have on output in the major developed economies (*Display 4*, see previous page). Several points are worth highlighting:

- The fiscal multiplier is expected to be greater than 1.0 in most peripheral euro-area countries, putting them in the high-risk category (the exception being Ireland, which is in the medium-risk category). It is important to note that these calculations are for uniform fiscal consolidations worth 1.0% of GDP, whereas many of the peripheral euro-area countries are still tightening policy more aggressively than this (in which case, our research shows that the multiplier might be even higher).

Display 5: Overvalued Currencies...

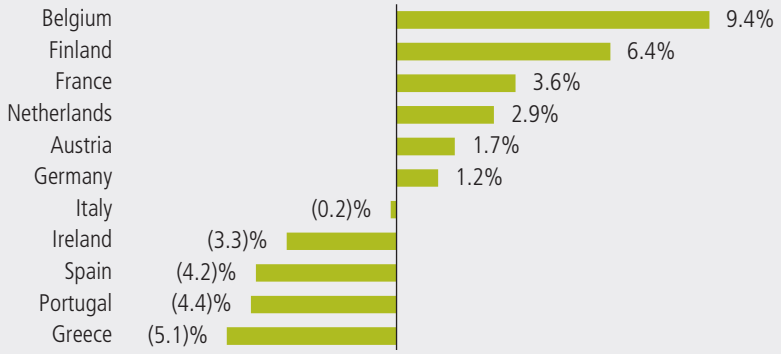
Deviation in 2010 Real Exchange Rates from Long-Run Average



As of December 31, 2010
Historical analysis does not guarantee future results.
Source: European Commission

Display 6: ...and Tight Credit Conditions in the Periphery

Annual Growth in Bank Lending to Households and Firms: 2012



As of December 31, 2012
Historical analysis does not guarantee future results.
Source: Haver Analytics

- Australia and Canada also fall into the high-risk category. This mainly reflects elevated real exchange rates owing, in part, to their position as commodity exporters. As a result, the impact of fiscal tightening may be overstated in both countries.
- The UK is in the medium-risk category, with an anticipated fiscal multiplier of 0.4. This suggests that weak growth may have less to do with fiscal tightening than is often imagined.
- The US (together with Germany and Japan) falls into the low-risk category, where the multiplier is expected to be negative. Again, it should be noted that these results apply to a fiscal tightening worth 1.0% of GDP. Were the US to tighten policy more aggressively than this, our analysis suggests

that nonlinear effects would take over and that the multiplier would turn positive. The US may be in the low-risk category, but it cannot tighten fiscal policy with impunity.

Is Size Important?

Our findings help explain why adjustment programs in the periphery have run so far off course. These countries are pursuing large, multiyear fiscal adjustments, had overvalued currencies at the beginning of their programs (*Display 5*), cannot devalue[7] and have experienced a huge tightening of credit conditions (*Display 6*).

In our view, it is important to recognize that these factors have acted in concert to magnify the impact of fiscal tightening in the periphery. In other words, size alone cannot explain all of the resultant damage. To understand why, it is worth considering the experience of Denmark in the early 1980s.

Between 1983 and 1986, the Danish government tightened fiscal policy by 9% of GDP (on a par with the type of adjustment seen in the periphery). Far from slipping into recession, though, the Danish economy grew at an average annual rate of 3.9% during this period. Not only was this marginally better than the global average (3.8%); it was also Denmark's strongest period of economic growth since the 1960s—and has not been bettered since. What can explain this remarkable outcome?

Our model helps us identify three crucial factors. First, the Danish currency fell sharply in the early 1980s and was well below its long-run average when fiscal consolidation started. Second, Denmark is a very small, open economy. Third, the tightening took place during a domestic credit and asset-price boom. This is a far cry from the current situation in the euro-area periphery.

The Danish example suggests that the size of a fiscal adjustment is not the sole factor determining whether or not it is likely to be successful. Equally, though, it is important to realize that the "expansionary austerity" seen in Denmark is only possible when a number of key conditions have been met.[8] As none of these conditions was satisfied in the periphery, it is hardly surprising that aggressive fiscal tightening has led to deep recessions/depressions in these countries.

Intelligent Design

Historically, there has been a huge variation in outcomes when countries have tightened fiscal policy. It follows that there is no such thing as a universal fiscal multiplier to be applied in all countries at all times. The truth is more complicated.

By identifying factors likely to influence the success or failure of a consolidation program, our analysis provides a framework for deciding when, and how aggressively, to tighten fiscal policy. The key factors are:

- the size and duration of the adjustment itself;
- the flexibility of the exchange rate and the economy's openness to international trade; and
- the tightness of credit conditions.

Again, it is the interaction of all three factors, rather than any single factor, that has made fiscal tightening so corrosive in the euro area.

A better approach to budgetary consolidation in the euro area would have been to focus on medium-term reform of the public finances, coupled with structural reforms to improve competitiveness and growth. Our analysis also suggests that it would have been preferable to delay fiscal tightening until banking systems had recovered—all the more so given the exchange-rate constraint facing these countries.

Sadly, political dynamics meant this was not possible. Driven by mistrust, painful up-front fiscal tightening in the periphery has become a *sine qua non* for financial support from richer euro-area countries (without which most of the periphery would now be bankrupt). Unfortunately, after three years of pain, there is still no light at the end of the tunnel.

Not surprisingly, the public's appetite for austerity is starting to wane. Worse still, the social backlash—evident last year in Greece and, more recently, Italy—may make it more difficult for governments to gain popular consent for the reforms needed to restore growth, maintain social cohesion and stabilize public finances over the medium term.

In our view, Europe's leaders need to learn from their mistakes, find a better balance between austerity and growth, and address voter concerns. Until they do, investors will continue to question the solvency of some euro-area countries and wonder how long it will be before sentiment turns against the euro. ■

[7]At least against the other euro-area countries, who account for between 35% (Greece) and 64% (Portugal) of external trade. It is true that most of the peripheral countries are currently implementing internal devaluations by cutting labor costs. In the near term, though, this is only likely to compound the impact of fiscal tightening.
[8]The experience of Denmark (and Ireland) in the 1980s gave rise to the concept of the "expansionary fiscal contraction," whereby an aggressive tightening of fiscal policy can actually lift output growth. But even the proponents of this idea recognized the importance of taking other factors into account when explaining the positive impact on output: "The effects of the fiscal turnaround cannot be understood if they are not placed against the backdrop of the accompanying monetary and exchange rate policies"—Francesco Giavazzi and Marco Pagano, "Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries," National Bureau of Economic Research (NBER) Working Paper No. 3372 (May 1990).

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