

LECTURE 15

EXPANSIONARY FISCAL CONTRACTIONS?  
MARCH 14, 2018

I. OVERVIEW

II. ORIGIN OF THE IDEA OF EXPANSIONARY FISCAL CONTRACTIONS

- A. Normal short-run impact of fiscal contraction
- B. Giavazzi and Pagano
  - 1. The cases of Ireland and Denmark
  - 2. Possible mechanisms by which budget cutting could raise growth
  - 3. How could one model these ideas?
  - 4. Discussion
- C. Alesina and Ardagna's evidence
  - 1. How do they identify fiscal consolidations?
  - 2. Findings

III. WILL IT HURT? MACROECONOMIC EFFECTS OF FISCAL CONSOLIDATIONS

- A. Why might Alesina and Ardagna's study be flawed?
- B. WEO's action-based approach
- C. Are consolidations contractionary?
- D. What factors make effects of fiscal austerity less negative?
- E. Results for tax-based and spending-based consolidations
- F. Implications of the study

## LECTURE 15

# Expansionary Fiscal Contractions?



March 14, 2018

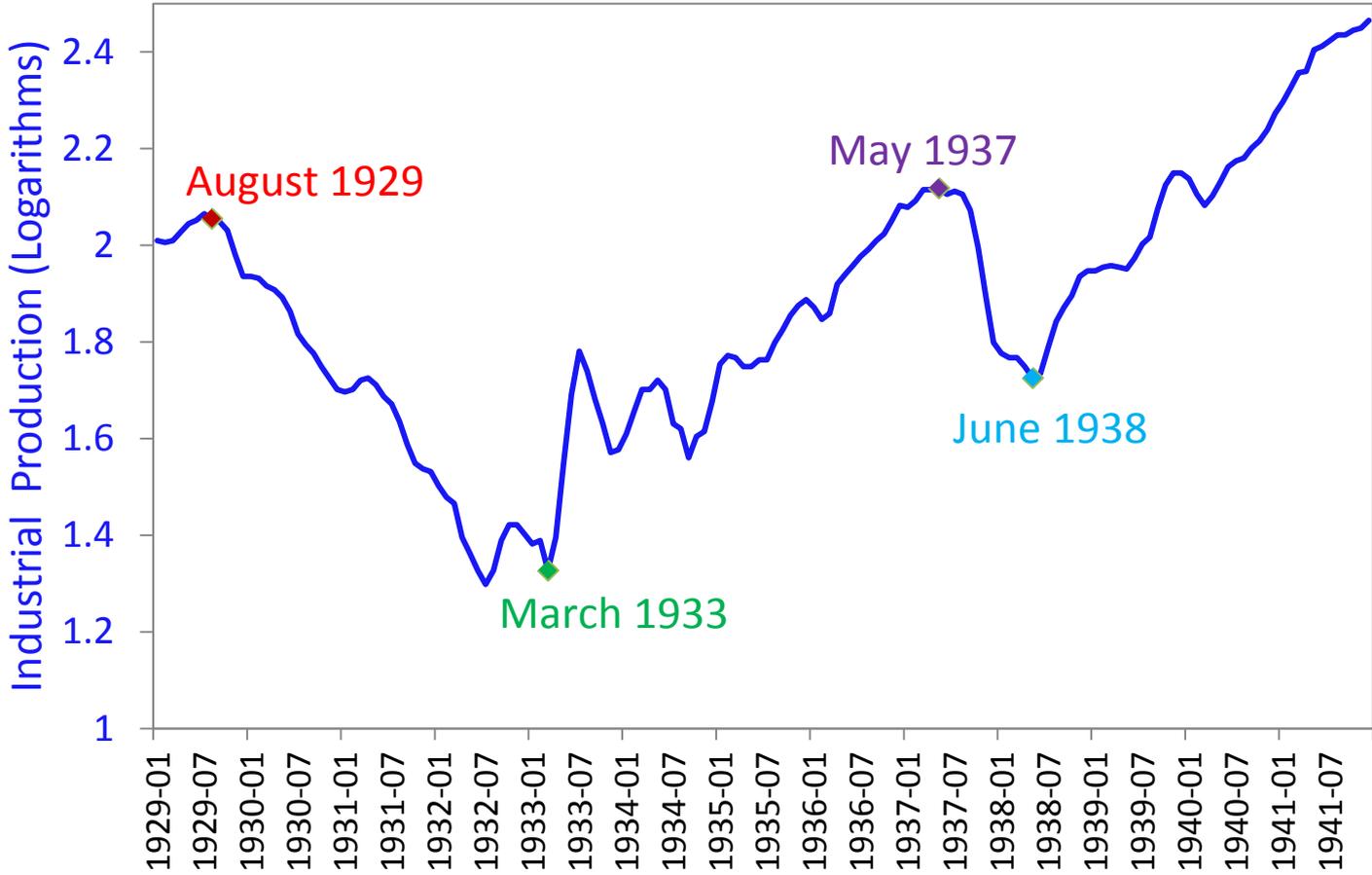
## Announcements

- My office hours next week will be Monday, March 19, 3:00–4:30 P.M.
- Reminder: Essay topics were distributed last time and are now posted on the course website.
- The essay is due at the beginning of lecture on Monday, April 16.

### III. UNDERSTANDING THE RECESSION OF 1937-38

(concluded)

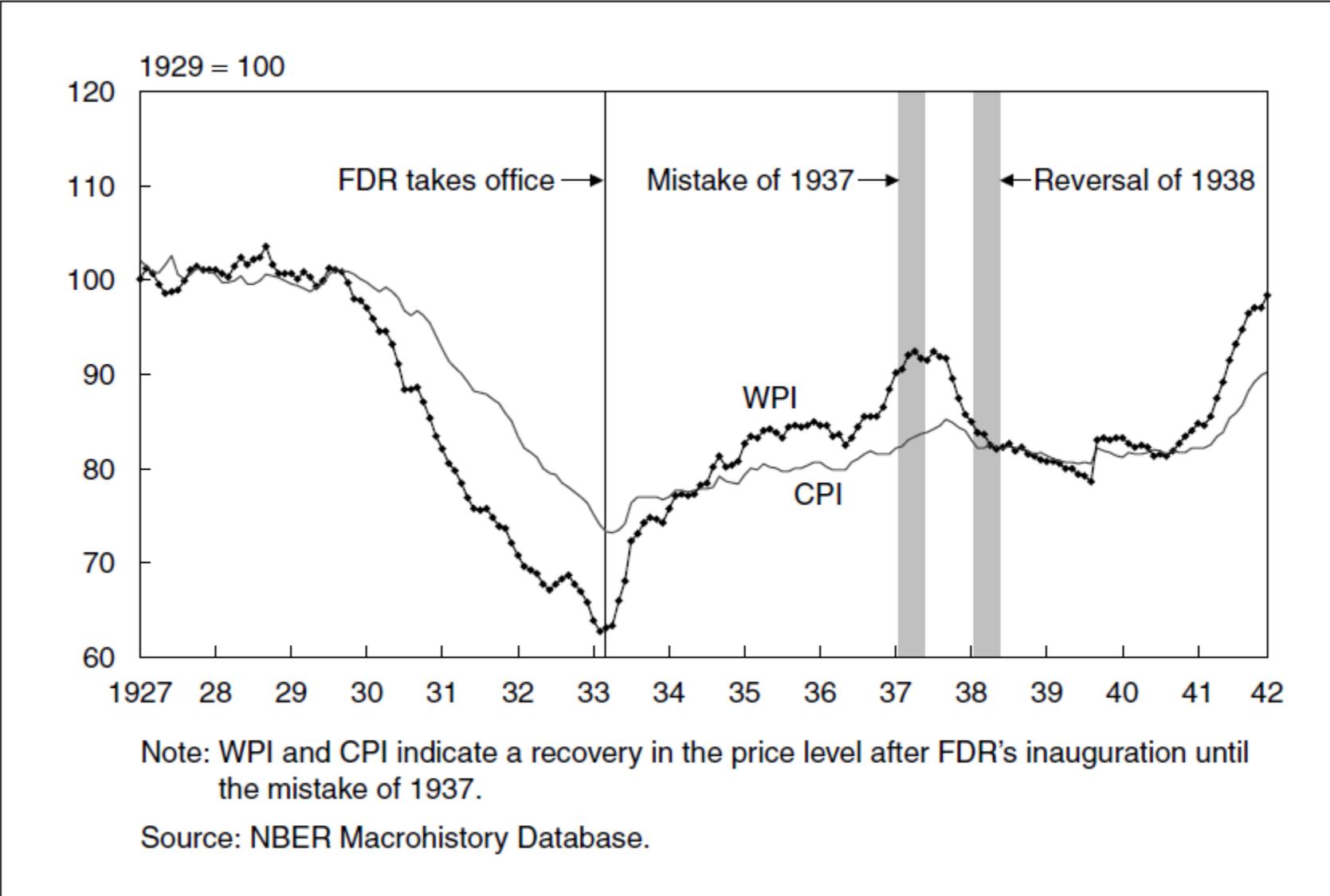
# Industrial Production, 1929-1941



# Possible Causes of the 1937-38 Recession

- Fiscal contraction
- Monetary contraction
- Change in expectations
- Supply shock/inflation shock
- Loss of confidence in government

Figure 5 Price Indices



# Possible Supply Shock

- National Labor Relations Act passed in 1935.
- Led to wage increases in some industries, particularly autos.
- This could have affected the timing of production and sales in autos.

# Loss of Confidence in Government?

- How might you get evidence on this?

# Conclusion

## LECTURE 15

# Expansionary Fiscal Contractions?



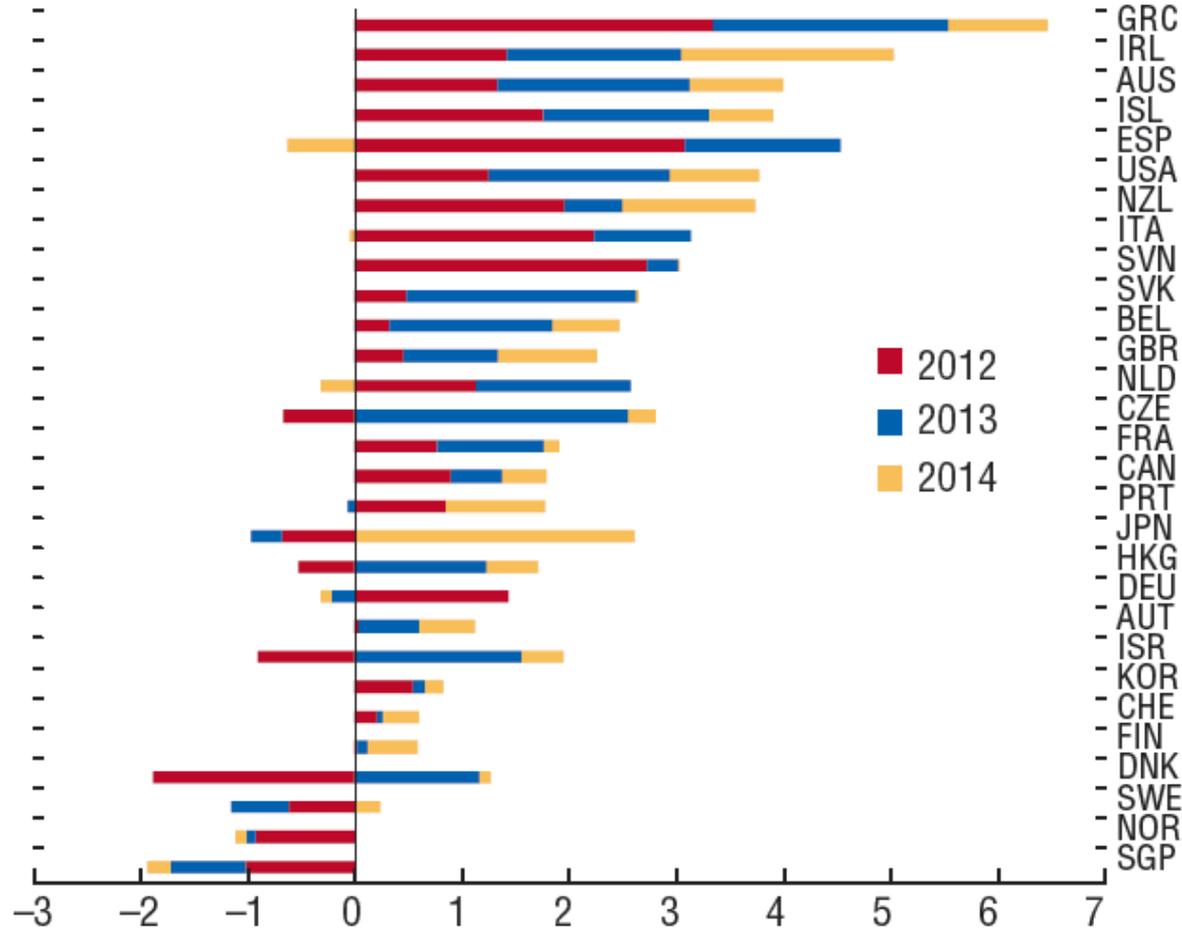
# I. OVERVIEW

# Fiscal Austerity

- Deliberate measures to get the government budget deficit down.
- Other terms: fiscal consolidation, fiscal reform, deficit reduction, fiscal contraction.

# Fiscal Consolidation in Advanced Countries

## 2. Change in CAPB, 2012–14 (Percent of potential GDP)



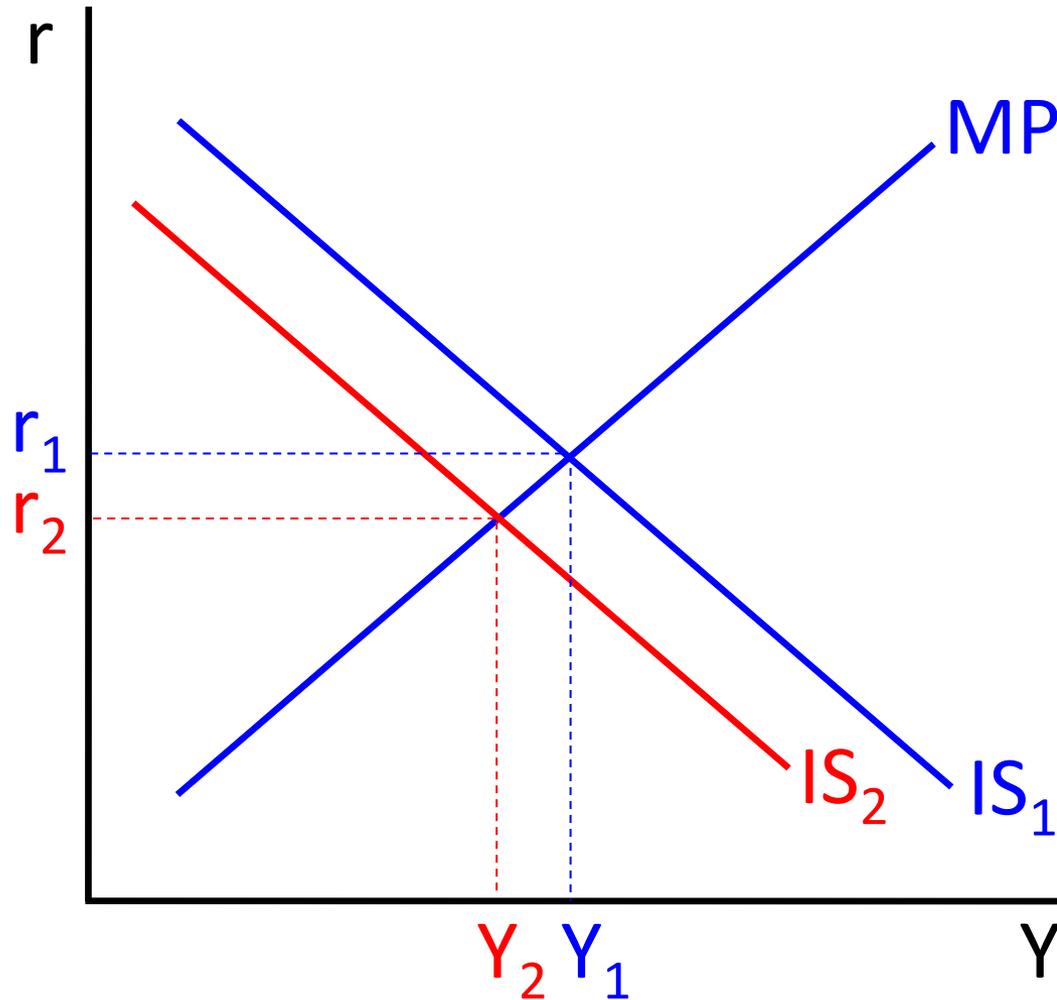
Source: IMF *Fiscal Monitor*, 2013.

# The Issue

- Does contractionary fiscal policy lower or raise short-term GDP growth?
- A variant: Are there circumstances when contractionary fiscal policy raises short-term GDP growth?

## II. ORIGIN OF THE IDEA OF EXPANSIONARY FISCAL CONTRACTIONS

# Effect of a Fiscal Contraction in the IS-MP Model



## Giavazzi and Pagano

- Look at two countries that seem to have had expansionary fiscal contractions.
- Ireland in the late 1980s and Denmark in the mid-1980s.



# How Could Fiscal Contractions Be Expansionary?

- Severe budget problems could be damaging confidence; getting deficit under control improves confidence.
- Severe budget problems are raising all interest rates and hurting the financial system. Fiscal reform lowers rates and allows firms and consumers to borrow at reasonable rates.
- Budget problems are a symptom of dysfunctional government. Fiscal consolidation is a sign that the government is functioning, and so may be correlated with other measures that are good for growth.

## How Could One Model These Ideas?

- Perhaps  $C = C(Y - T, G - T)$  or  $C = C(Y - T, G)$ , with  $C$  lower if  $G - T$  is higher (or if  $G$  is higher).
- Perhaps a similar impact on investment:  $I = I(r, G - T)$  or  $I = I(r, G)$ .
- Maybe those effects are nonlinear: over normal ranges,  $G - T$  or  $G$  has little impact on  $C$  or  $I$ , but at high levels they do.
- Perhaps a model with multiple interest rates: The central bank sets  $r_{\text{short-term}}$  but  $I = I(r_{\text{long-term}})$ , and  $r_{\text{long-term}} - r_{\text{short-term}}$  is a function of  $G - T$  or of  $G$ .

# Discussion

- Does it make sense to motivate a theory based on two observations that depart from the usual pattern?
- Why might these two cases be unusual?
  - Countries are small.
  - Fiscal and economic problems are localized.
  - Episodes predate the creation of the euro, so could use country-specific monetary and exchange rate policy.

# Are Giavazzi and Pagano Thinking of Their Regressions as Estimating Causal Effects?

- “The regressions in the table are *not* to be seen as estimates of a structural model, but rather as a way to summarize the main correlations in the data.”
- **Table 1 EFFECTS OF FISCAL CONSOLIDATION ON PRIVATE CONSUMPTION**
- “So far, the data are consistent with the predictions of a Keynesian textbook. Increases in government spending, however, display a negative relationship with consumption. ...”

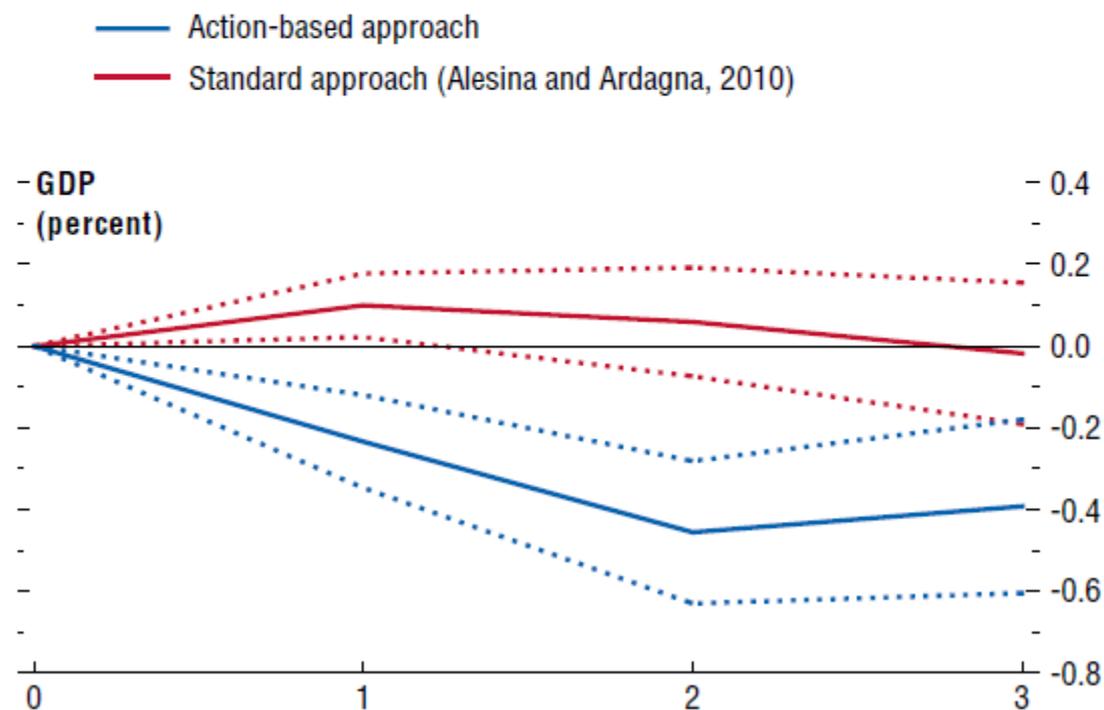
## Looking at More Countries: Alesina and Ardagna's Approach

- Look at many advanced economies over the past 30 years.
- Identify fiscal consolidations mechanically as times when the cyclically-adjusted budget deficit falls by 1.5% of GDP.

### Figure 3.10. Impact of Large Fiscal Consolidation on GDP and Unemployment: Action-Based Approach versus Standard Approach

*(Impact of each additional 1 percent of GDP fiscal consolidation)*

Fiscal retrenchment usually triggers faster growth and lower unemployment according to the standard approach, exemplified by Alesina and Ardagna (2010). But according to our action-based approach, the opposite is true.



The standard approach found that fiscal consolidation, particularly through spending cuts, raised GDP.

# III. WEO: WILL IT HURT? THE MACROECONOMIC EFFECTS OF FISCAL CONSOLIDATION

## Why might the standard approach tend to find that fiscal consolidations are expansionary?

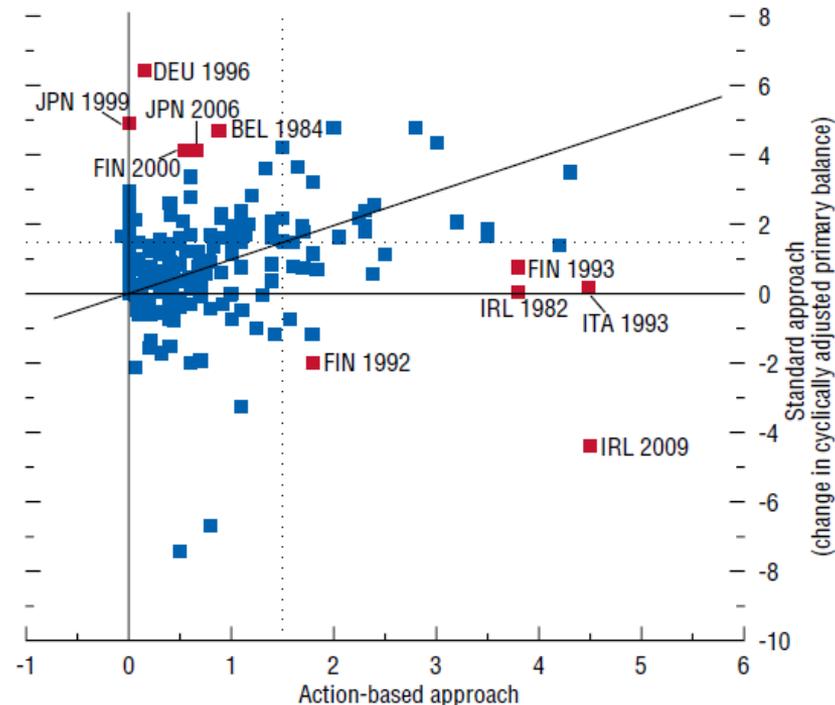
- It may identify as consolidations times when revenues rose because of asset price booms (which are also times when output tends to rise).
- It may include consolidations that were followed by growth, but exclude consolidations that were followed by recessions (because the consolidations followed by recessions were reversed).
- It may identify as consolidations the end of one-time dramatic actions that may be associated with other factors aiding growth (such as the reunification of Germany).

## Action-based approach (WEO)

- Identify fiscal consolidations from narrative sources.
  - When did policymakers say they were trying to reduce the budget deficit?
- WEO finds that the action-based approach yields very different observations.

**Figure 3.15. Size of Fiscal Consolidation:  
Action-Based Approach versus Standard Approach<sup>1</sup>**  
(Percent of GDP)

There are numerous cases in which the standard approach and our action-based approach differ regarding the presence and size of fiscal consolidation. After analyzing in detail the 10 largest discrepancies between the two approaches, we conclude that our action-based approach more accurately identifies the size of fiscal consolidation.



Sources: Alesina and Ardagna (2010); and IMF staff calculations.

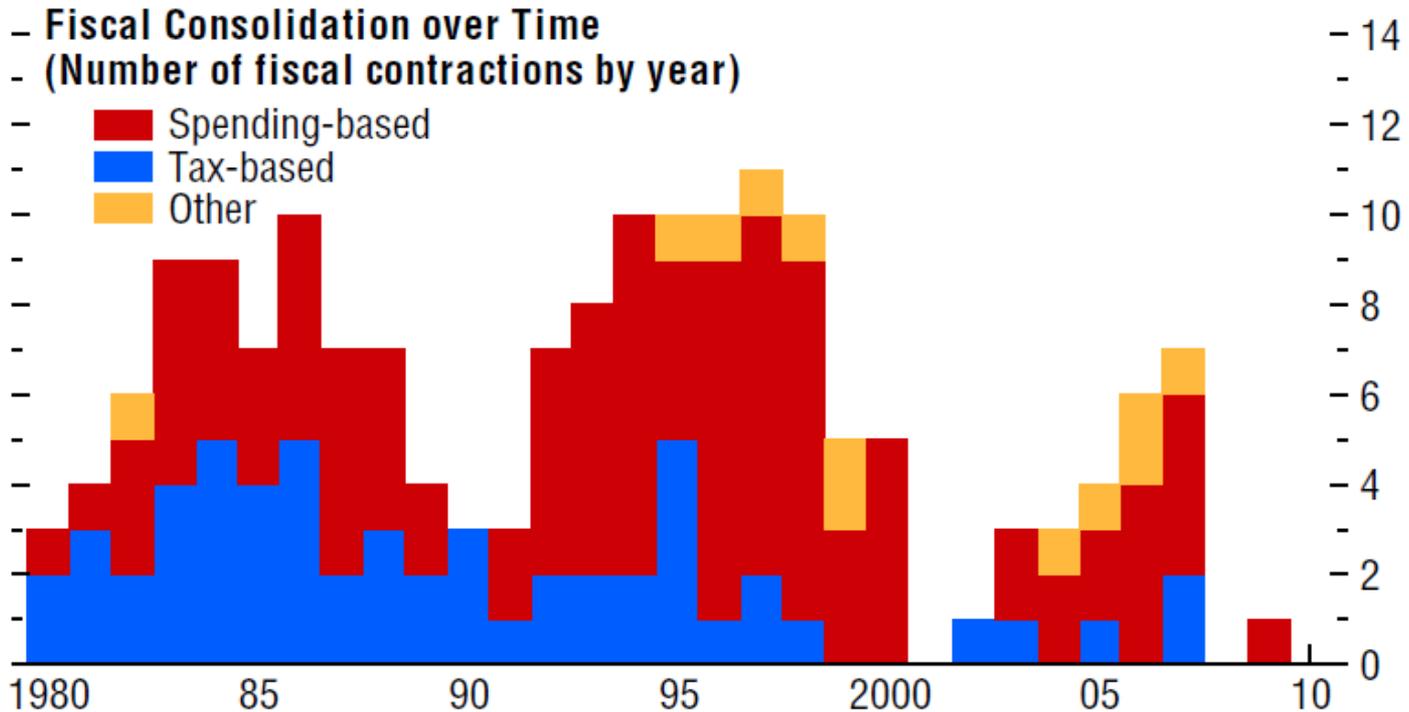
Note: The diagonal line reports the 45-degree line, where the action-based approach and standard approach agree. Dotted lines indicate episodes of consolidation equal to 1.5 percent of GDP. Highlighted observations indicate years for which the two approaches differ by more than 3 percent of GDP.

<sup>1</sup>BEL: Belgium; DEU: Germany; FIN: Finland; IRL: Ireland; ITA: Italy; JPN: Japan.

- Germany (1996): The CAPB-to-GDP ratio increased by 6.4 percentage points, but the policy record indicates fiscal consolidation measures amounting to only 0.2 percent of GDP. The large increase in the CAPB-to-GDP ratio in 1996 reflected a large one-time capital transfer in 1995, which implied a change in the CAPB-to-GDP ratio of about  $-7$  percentage points in 1995 and 6.4 percentage points in 1996. The sharp increase in the CAPB in 1996 thus had nothing to do with fiscal austerity measures. In particular, as reported in the 1996 *IMF Recent Economic Developments* report (p. 18), a one-time transfer of Treuhand (Trust Agency) and East German housing debt to the general government amounting to 6.8 percent of GDP occurred in 1995. This operation was recorded by the Organization for Economic Cooperation and Development (OECD) as a one-time increase in capital transfers that raised the general government deficit from 2.3 percent of GDP in 1994 to 9.7 percent of GDP in 1995. The deficit returned to a more normal level in 1996, at 3.3 percent of GDP. Therefore, the sharp increase in the CAPB in 1996 bears no relation to fiscal austerity measures, but instead reflects the end of a one-time capital transfer.

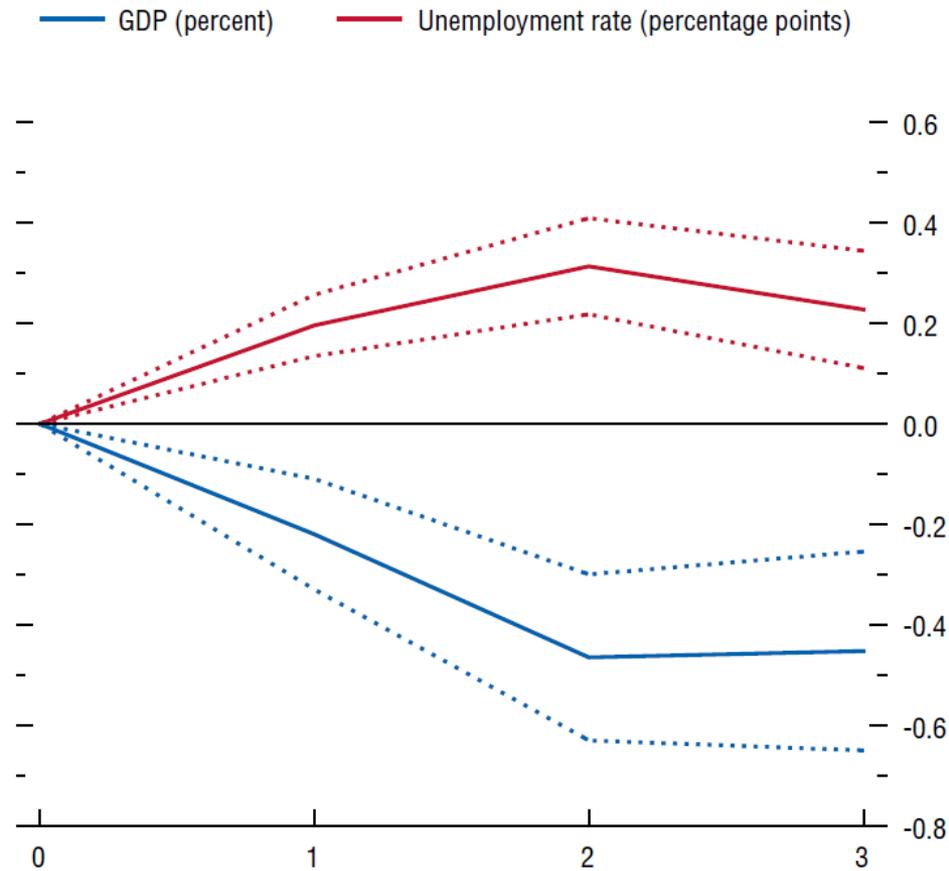
## Figure 3.1. Action-Based Fiscal Consolidation

There were about 170 cases of action-based fiscal consolidation over the past 30 years in advanced economies. Consolidation has often relied primarily on spending cuts. On average, action-based fiscal consolidation amounted to 1 percent of GDP a year, but the range was wide.



### Figure 3.2. Impact of a 1 Percent of GDP Fiscal Consolidation on GDP and Unemployment

Fiscal consolidation is normally contractionary. A fiscal consolidation equal to 1 percent of GDP typically reduces real GDP by about 0.5 percent and raises the unemployment rate by about 0.3 percentage point.



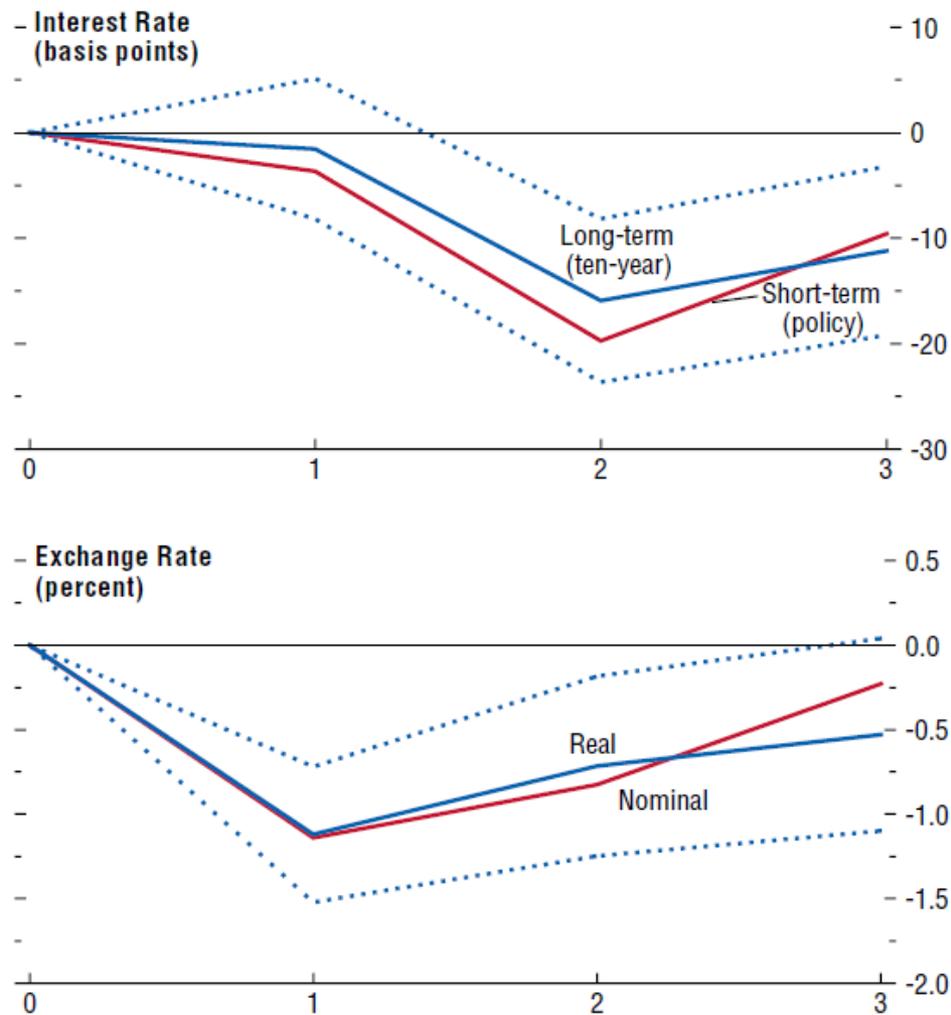
Source: IMF staff calculations.  
Note:  $t = 1$  denotes the year of consolidation. Dotted lines equal one standard error bands.

# What makes the impacts of consolidation smaller?

- Monetary expansion.
- Currency depreciation.

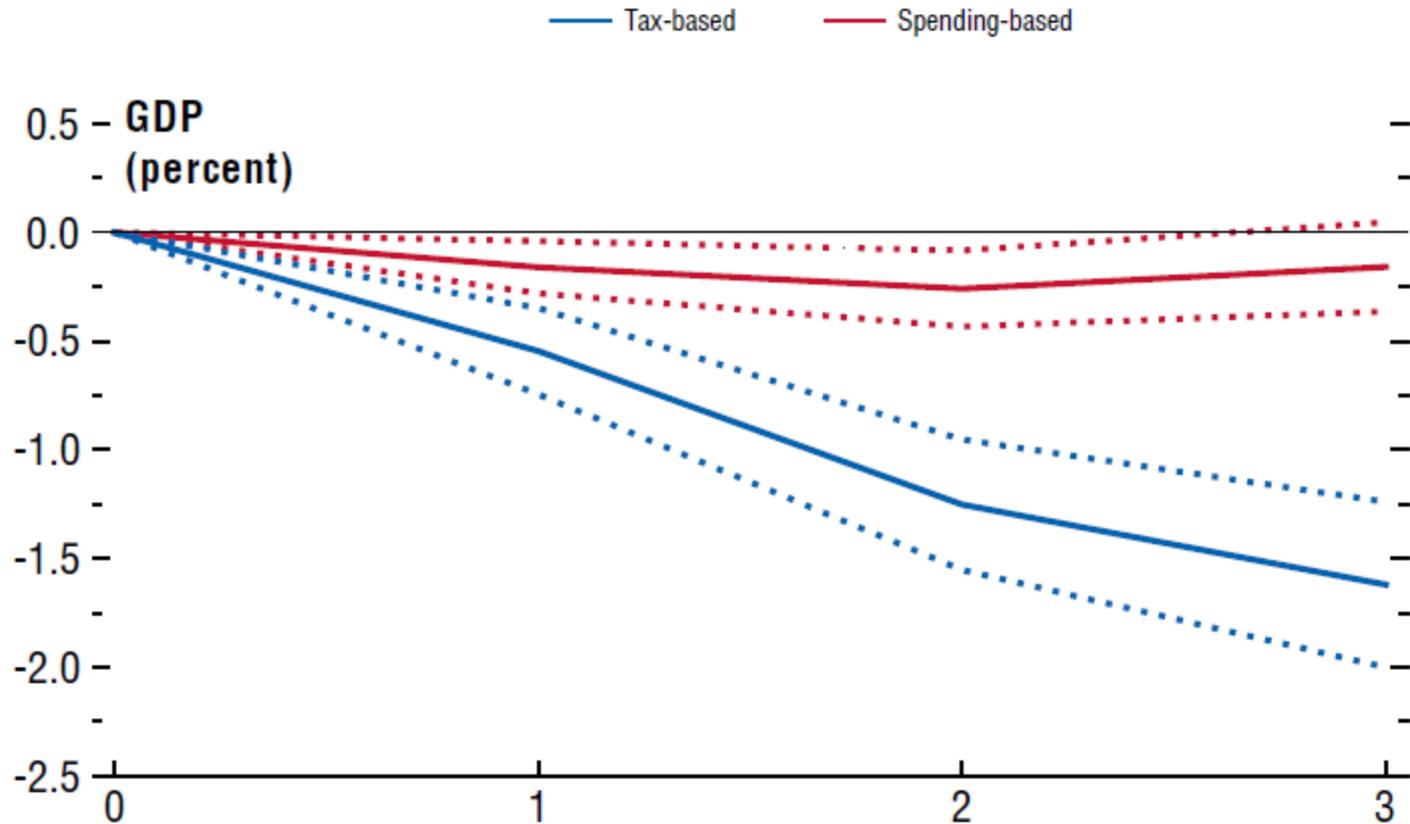
### Figure 3.3. Response of Monetary Conditions to a 1 Percent of GDP Fiscal Consolidation

Interest rate cuts and a decline in the value of the domestic currency usually play a key supportive role during episodes of fiscal consolidation.



### Figure 3.5. Impact of a 1 Percent of GDP Fiscal Consolidation: Taxes versus Spending

Spending-based consolidation is less contractionary than tax-based consolidation. GDP falls by less and unemployment increases less. Domestic demand contracts significantly as a result of both spending-based and tax-based consolidation, but the contraction is sharper after tax-based adjustments. A boom in net exports mitigates the contraction in both cases. A surge in exports drives the net export boom associated with spending-based consolidation. After tax-based consolidation, net exports rise mainly because imports fall.

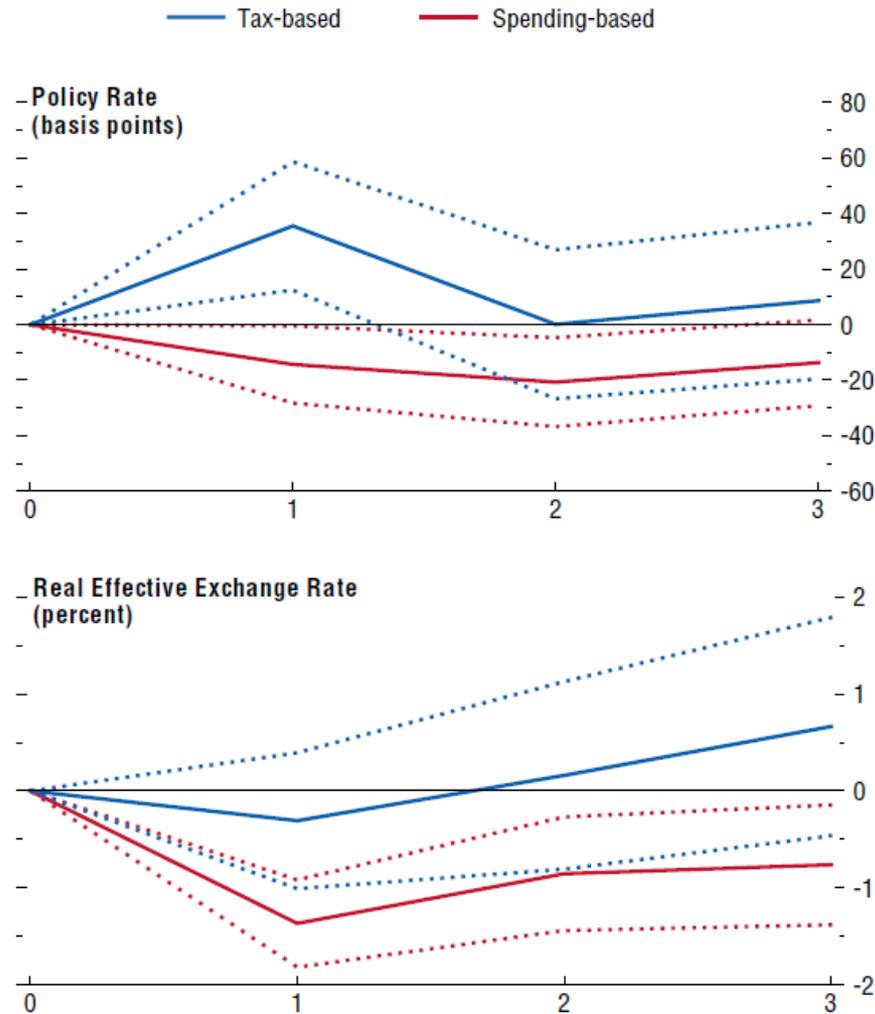


# Why are spending cuts less contractionary than tax increases?

- Monetary policy isn't used to counteract tax increases.
- Why?

### Figure 3.6. Composition and Monetary Conditions: Impact of a 1 Percent of GDP Fiscal Consolidation

Why are spending-based consolidations less contractionary? Partly because they benefit from monetary stimulus, whereas tax-based adjustments feature monetary tightening.



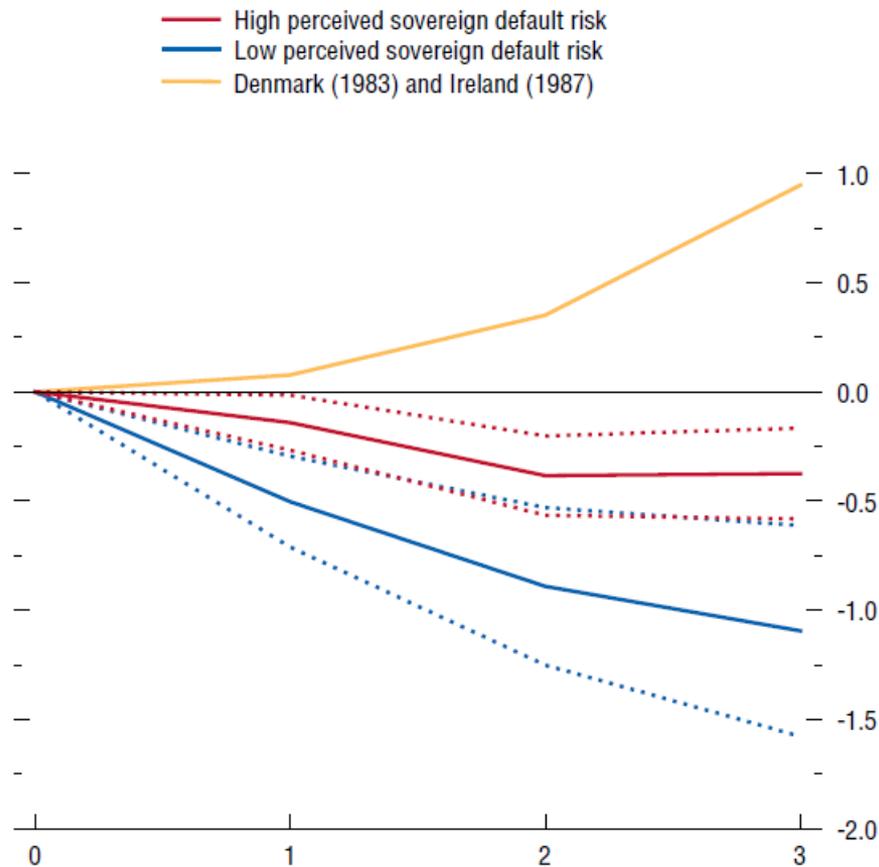
# Is there a confidence effect when default risk is high?

- Somewhat. Consolidation is less painful if you start with high risk of default.
- But Ireland and Denmark (Giavazzi and Pagano's two expansionary contractions) are still unusual.

### Figure 3.9. Estimated Impact on GDP of a 1 Percent of GDP Fiscal Consolidation

(Percent)

Fiscal consolidation preceded by high perceived sovereign risk is less contractionary than when preceded by low perceived default risk. But even for the group with high perceived risk, fiscal retrenchment rarely triggers faster growth. Exceptions include Denmark (1983) and Ireland (1987)—two cases of fiscal consolidation studied by Giavazzi and Pagano (1990)—which were expansionary.



## Implications of the WEO study:

- Deficit reductions will be painful.
- Particularly painful at the zero lower bound and when a country can not depreciate relative to its trading partners.
- Confidence effects appear to be small.

## Some Statistics on the Midterm

- Median: 91
- 25<sup>th</sup> percentile: 80
- 75<sup>th</sup> percentile: 102
  
- Note: Improvement will be rewarded in computing final course grades!

# Procedures for Grade Complaints

- If you think there was an ***error*** in grading your exam, you must submit your entire exam, along with a ***written*** explanation of why you think the grading was incorrect, to your GSI by one week from now.
- We will only correct clear-cut errors.
- Please be respectful of the GSIs' time!