

WHY SOME TIMES REALLY ARE DIFFERENT: MACROECONOMIC POLICY AND THE AFTERMATH OF FINANCIAL CRISES



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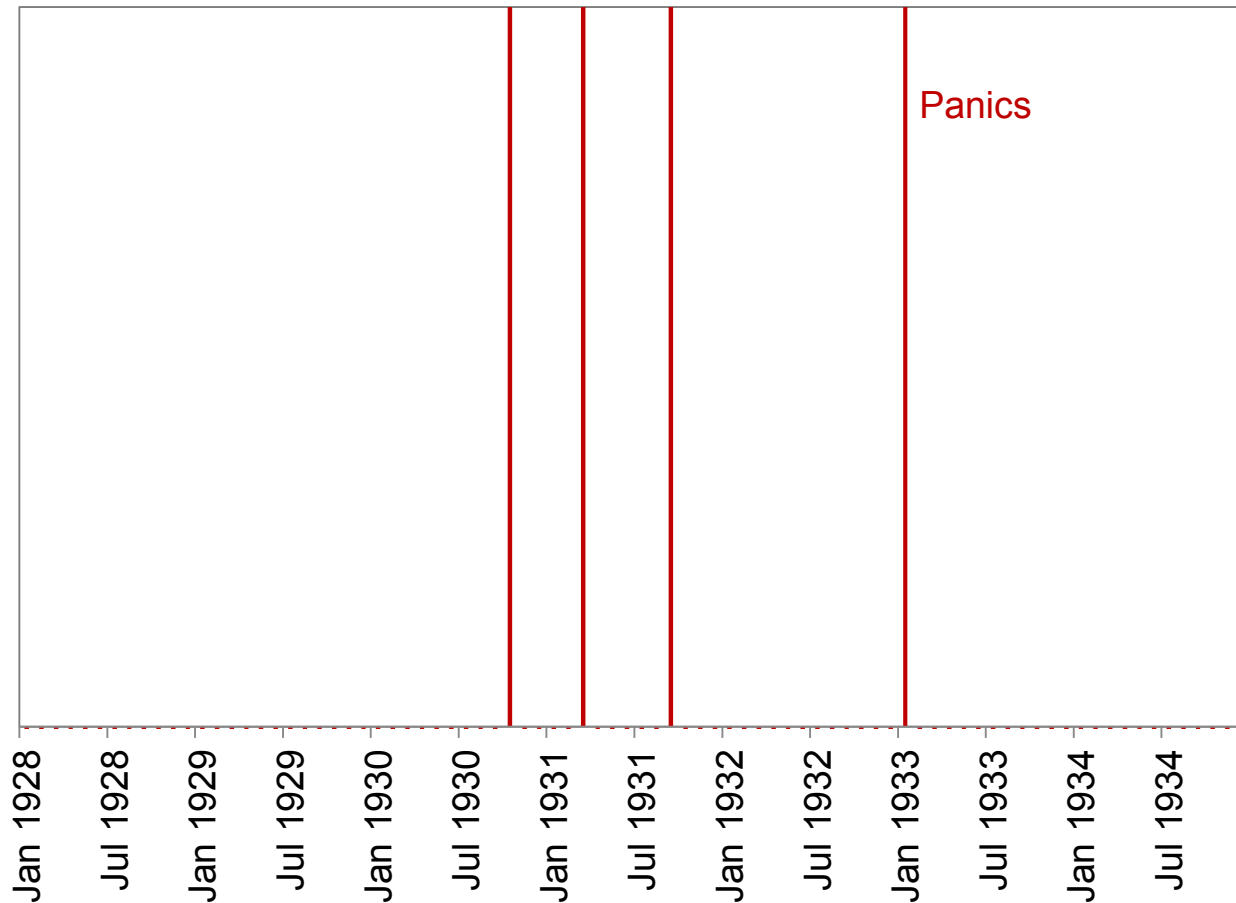






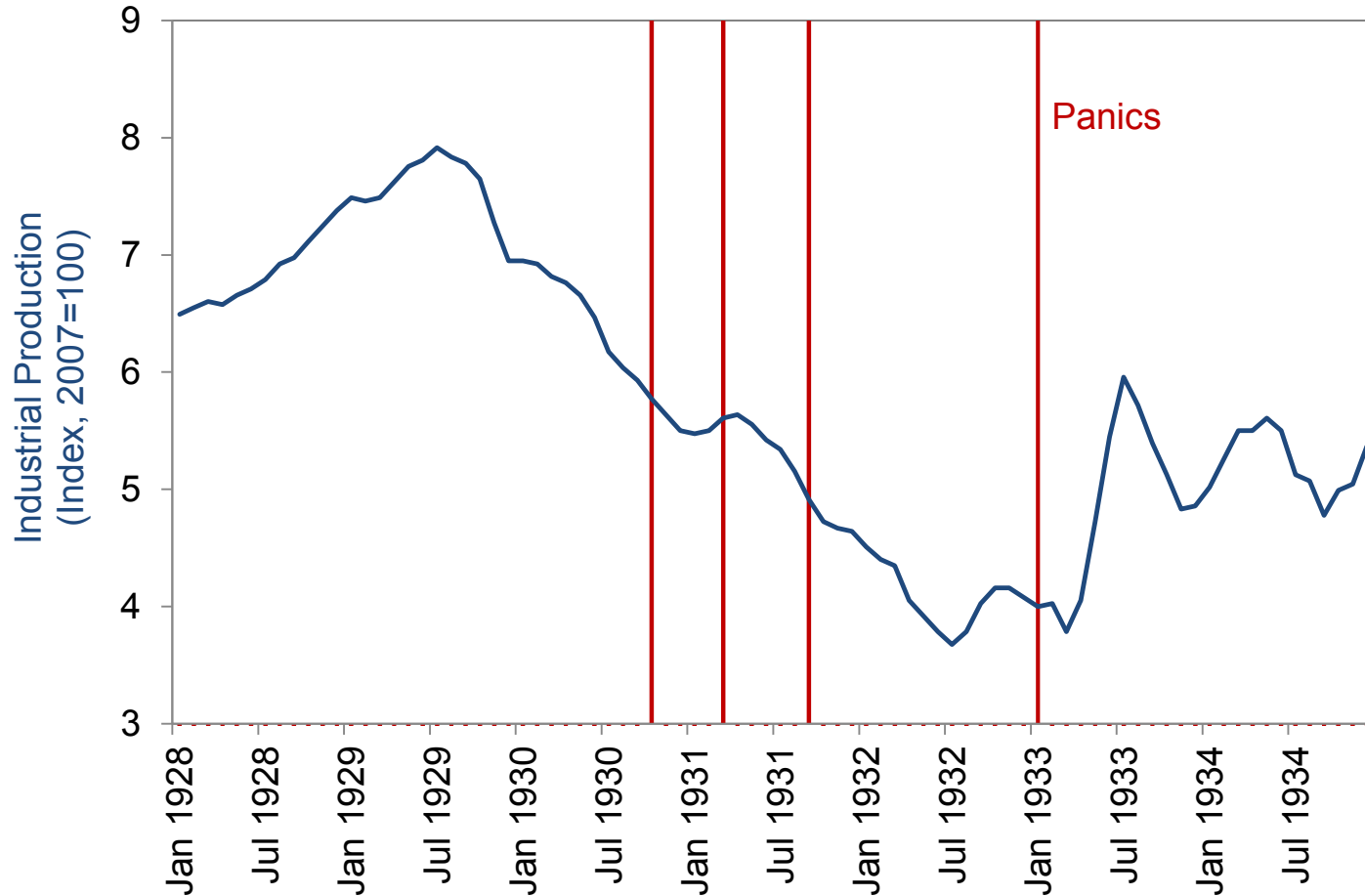
I. MOTIVATION AND OVERVIEW

Banking Panics in the Great Depression



Source: Friedman and Schwartz, *A Monetary History of the United States*.

Panics and Output in the Great Depression



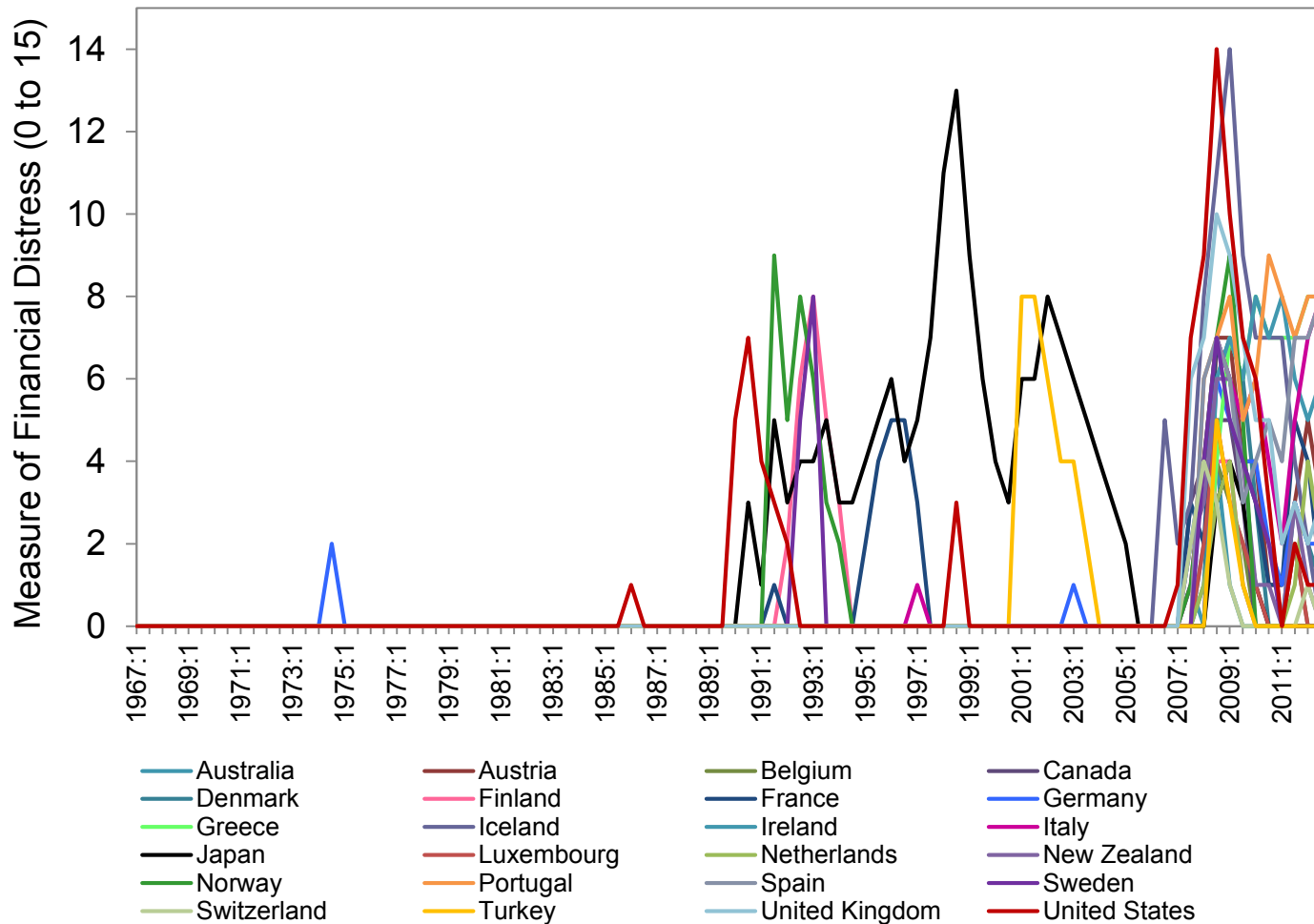
Source: Friedman and Schwartz, *A Monetary History of the United States* and Federal Reserve, <http://www.federalreserve.gov>.

Question

- What is the role of macroeconomic policy in explaining the variation in the aftermath of postwar financial crises?

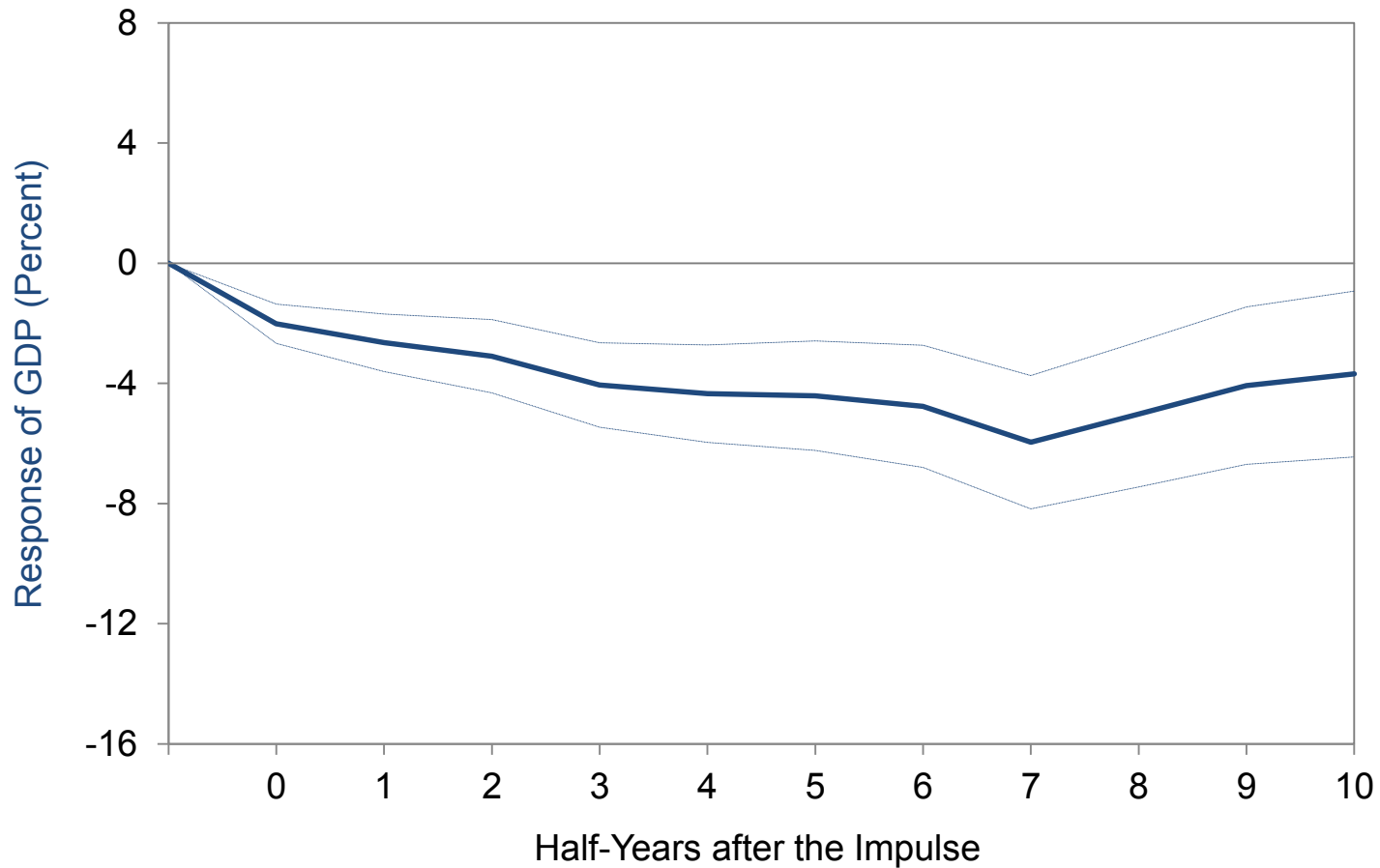
II. VARIATION IN THE AFTERMATH OF CRISES

New Measure of Financial Distress



Source: Romer and Romer, "New Evidence on the Aftermath of Financial Crises."

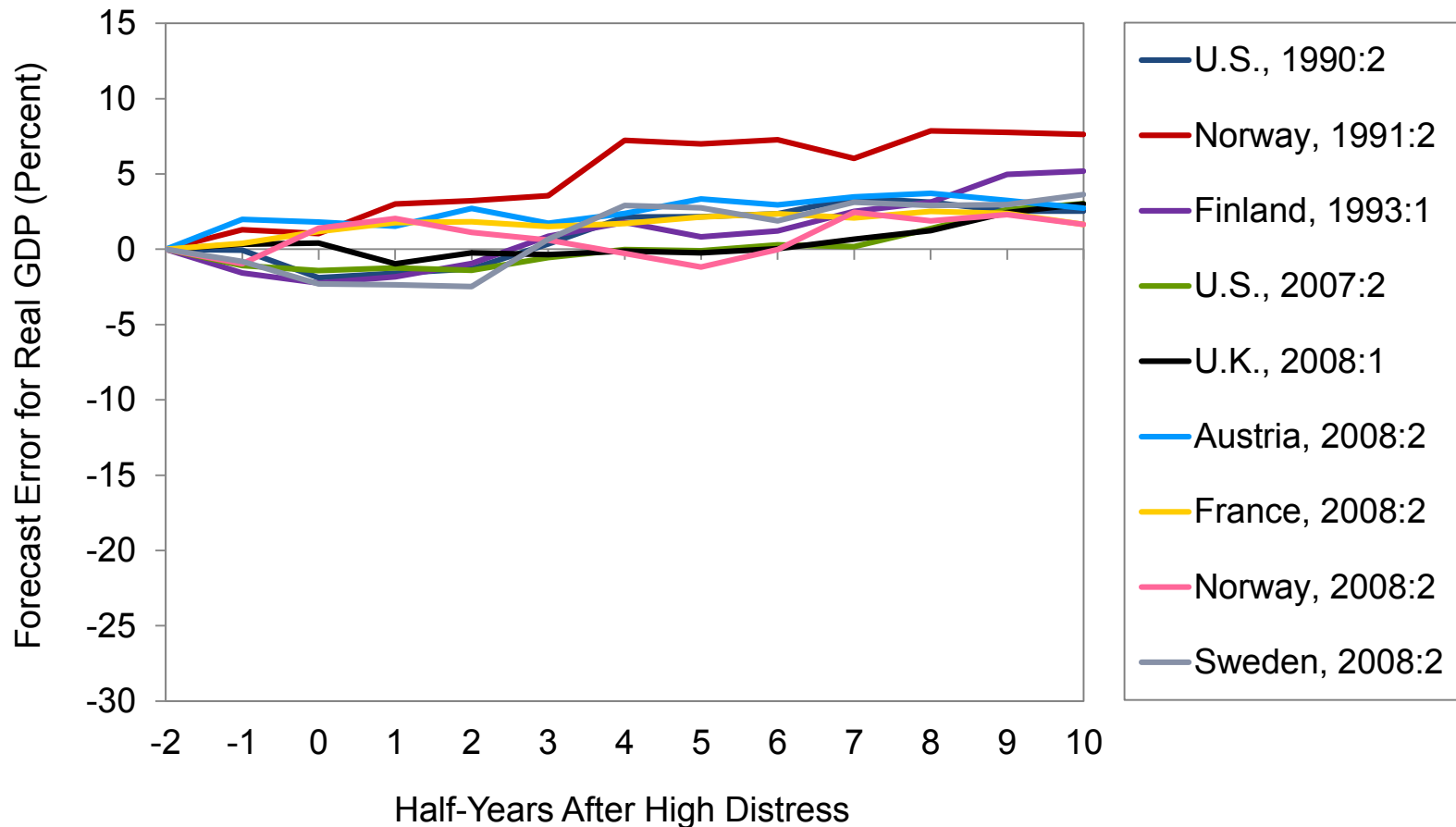
Behavior of Real GDP after a Financial Crisis



Notes: The figure shows the response to an impulse of 7 in financial distress. Dashed lines show the two-standard-error confidence bands.

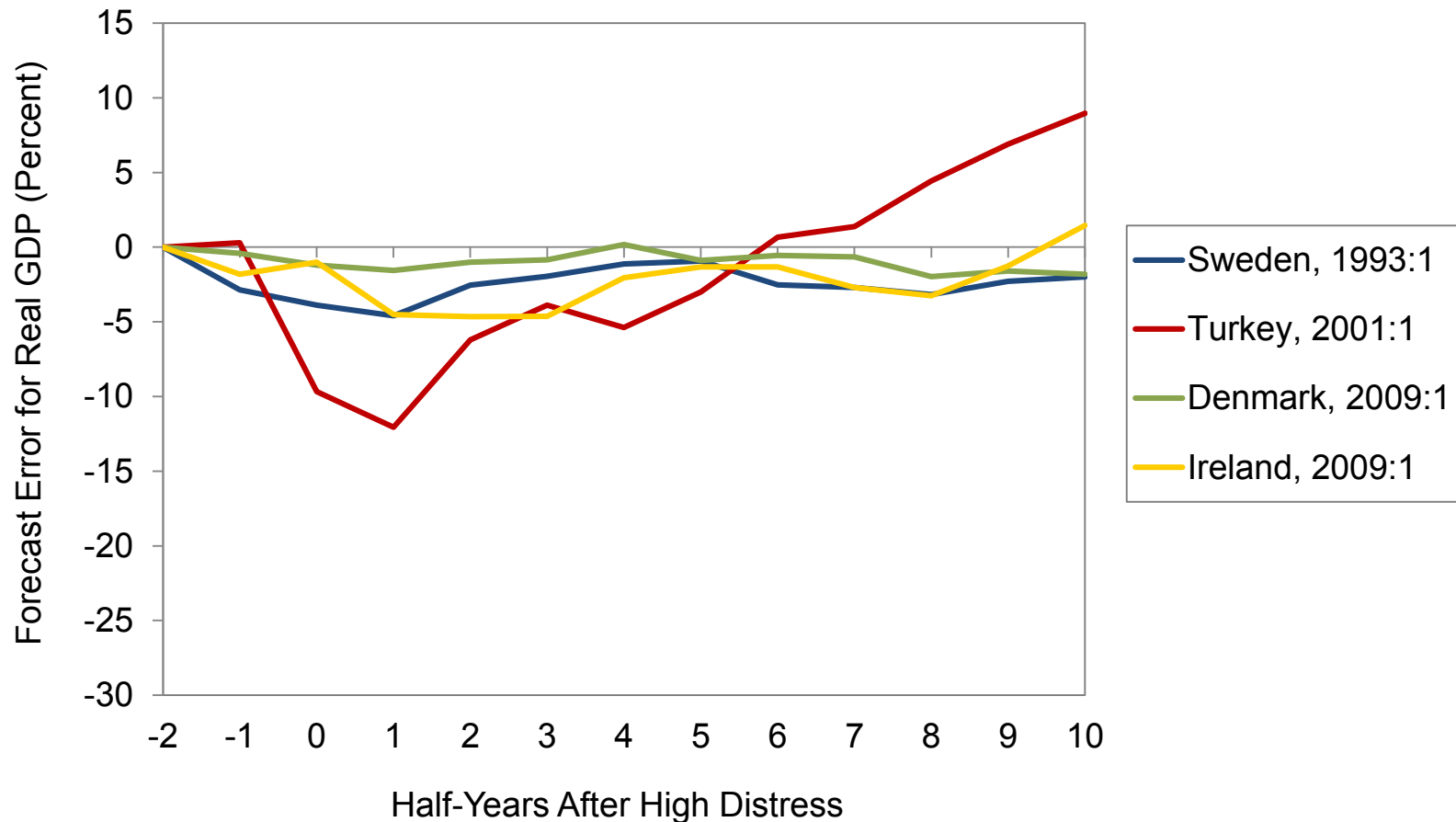
GDP Forecast Errors, Episodes of High Distress

Cases with Small or Positive Forecast Errors



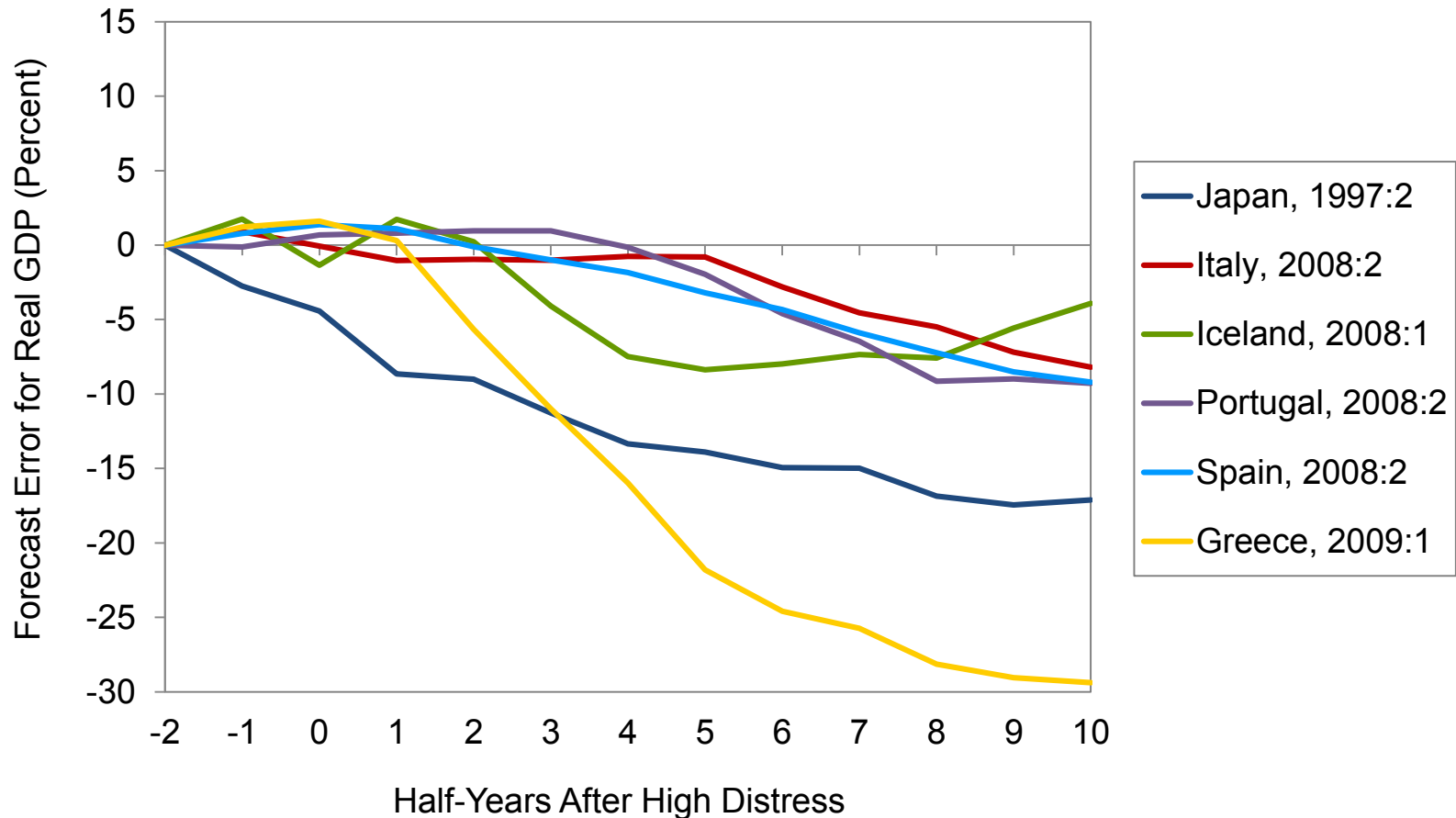
GDP Forecast Errors, Episodes of High Distress

Cases with Moderate Negative Forecast Errors



GDP Forecast Errors, Episodes of High Distress

Cases with Large Negative Forecast Errors



III. THE ROLE OF MACROECONOMIC POLICY SPACE IN ACCOUNTING FOR VARIATION

Measure of Monetary Policy Space

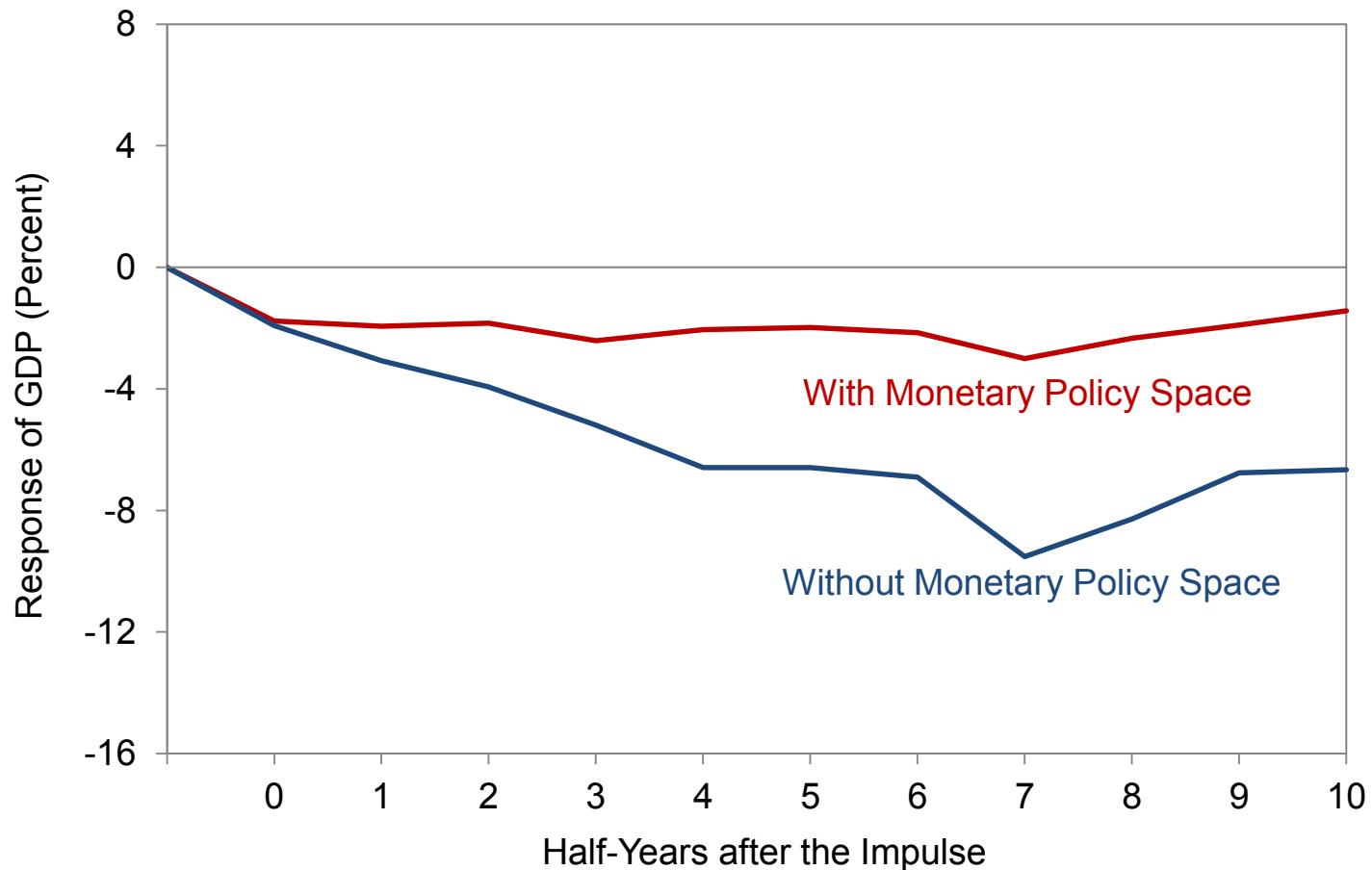
- **Baseline:** Dummy variable equal to 1 if the policy interest rate is greater than 1.25% in the previous half-year.
- We also consider a range alternative measures.

To Measure the Contribution of Policy Space

- We run panel regressions as before.
- We allow for an interaction effect between financial distress and prior policy space.
- If the coefficient on the interaction term is positive, this implies that the aftermath of a crisis is better when there is policy space.

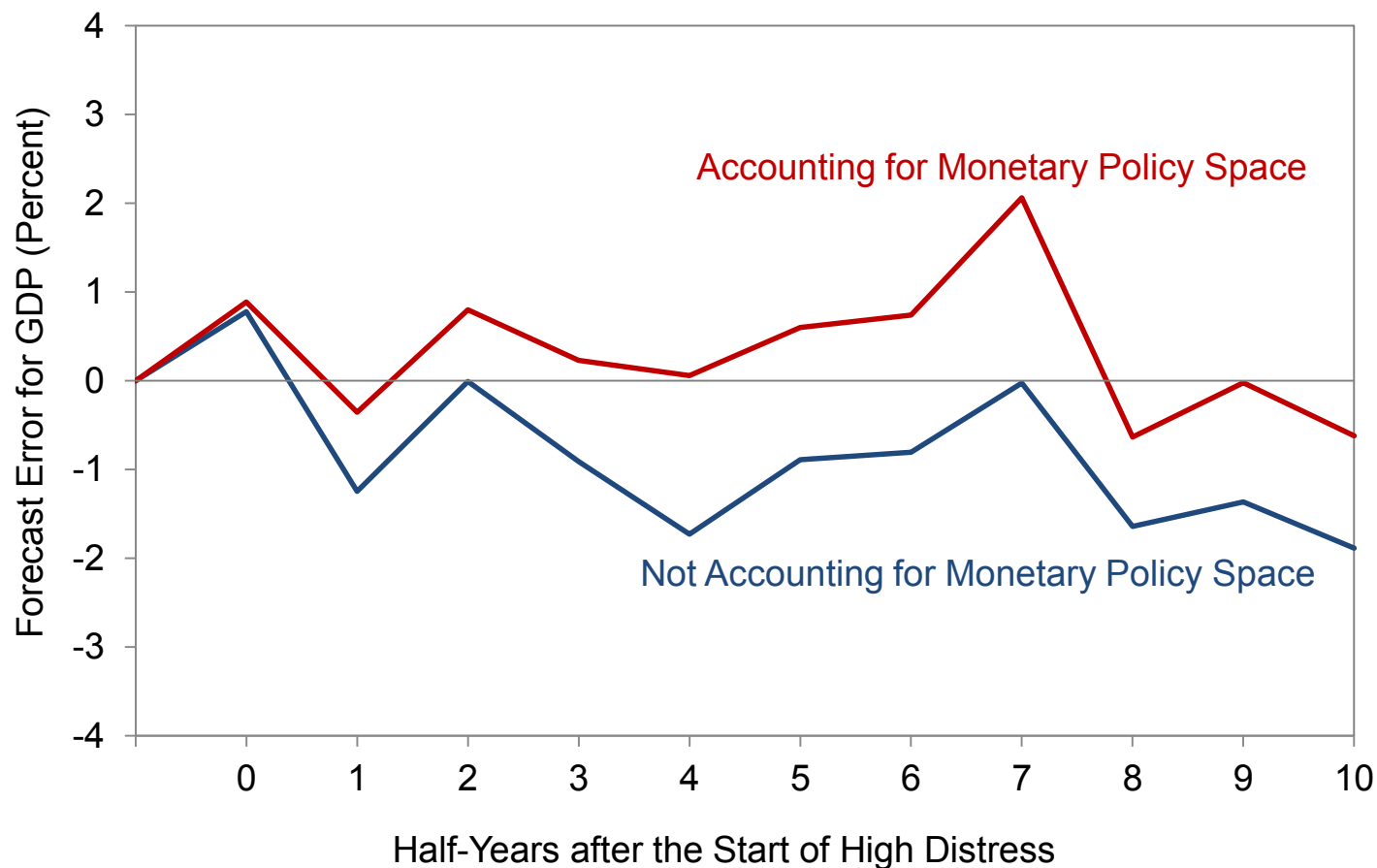
Behavior of Real GDP after a Financial Crisis

With and Without Monetary Policy Space



GDP Forecast Errors for Japan after 1997:2 Crisis

Accounting and Not Accounting for Monetary Space

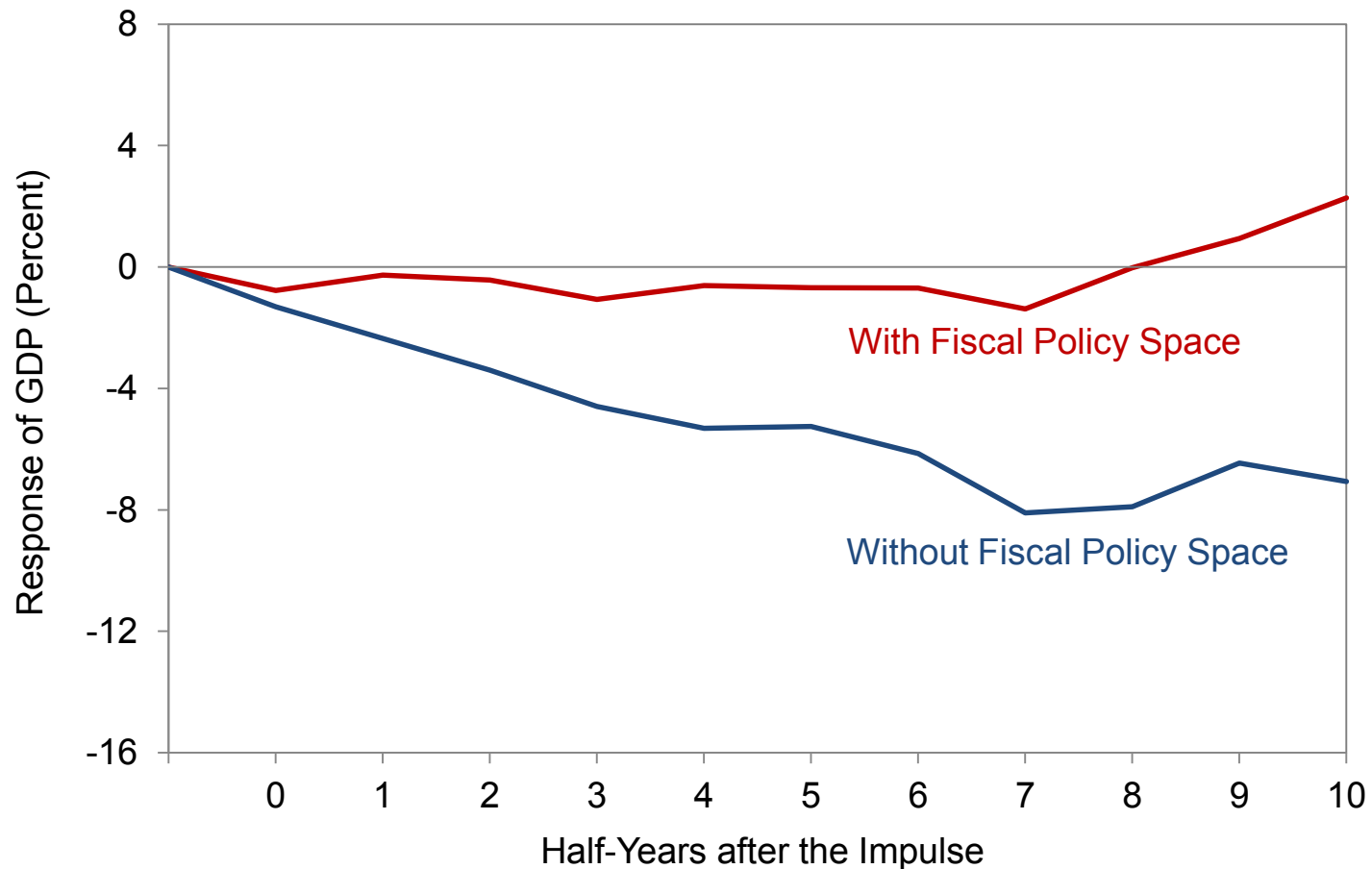


Measures of Fiscal Policy Space

- **Baseline:** Gross Debt/GDP in the previous calendar year (multiplied by -1).
- We also consider a range alternative measures.

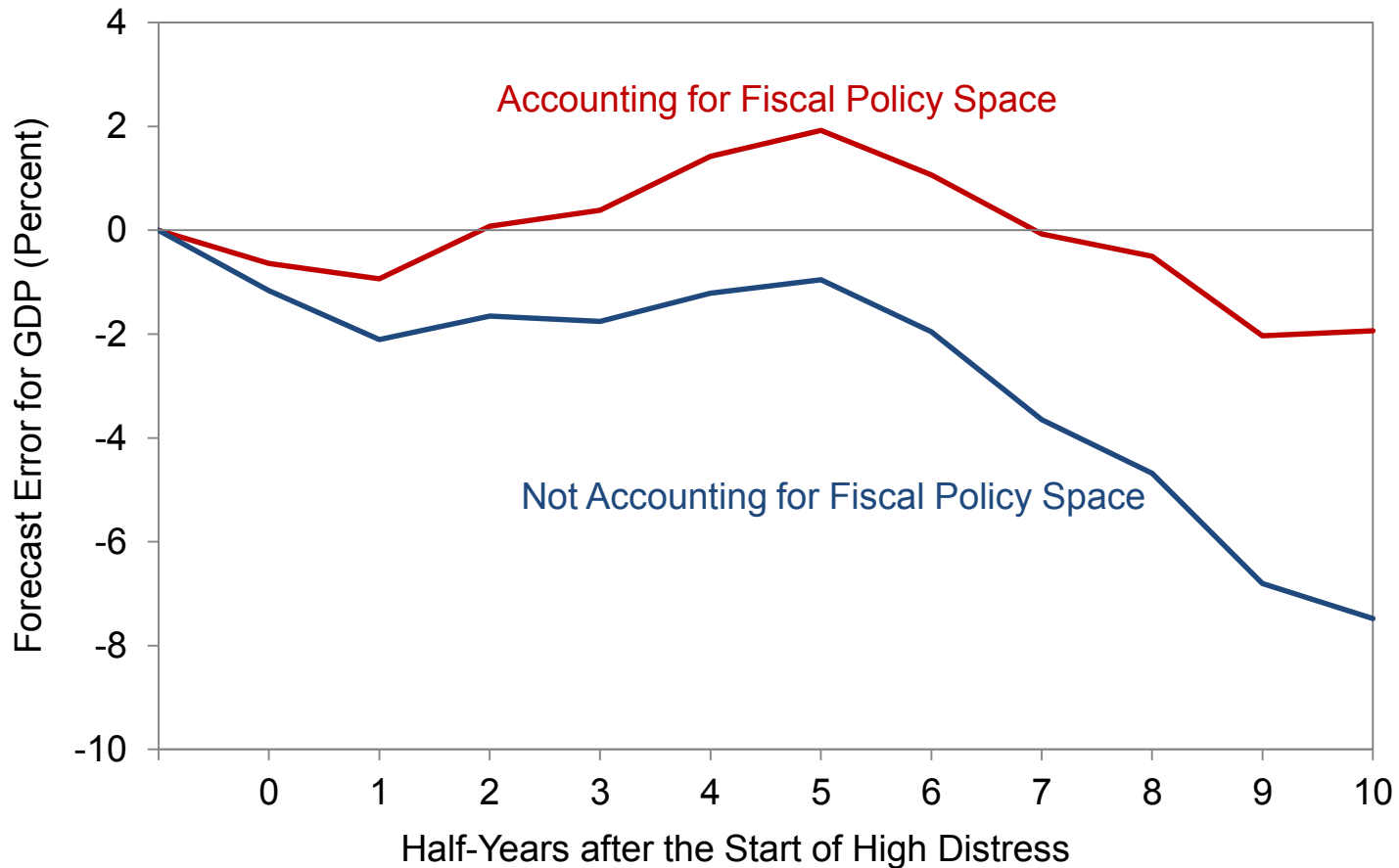
Behavior of Real GDP after a Financial Crisis

With and Without Fiscal Policy Space



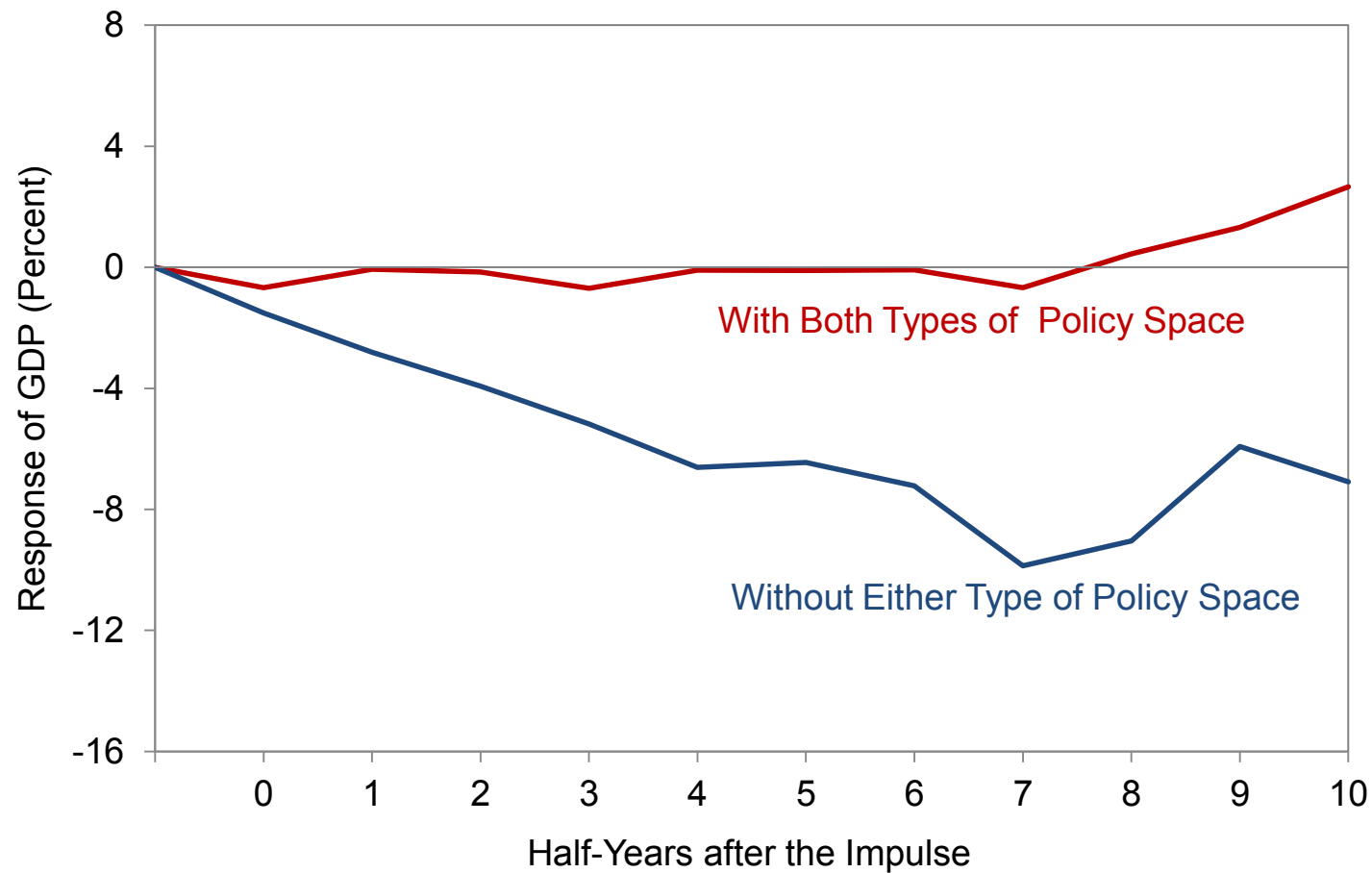
GDP Forecast Errors for Italy after 2008:2 Crisis

Accounting and Not Accounting for Fiscal Space



Behavior of Real GDP after a Financial Crisis

With *Both* Monetary and Fiscal Policy Space and Without *Either* Monetary or Fiscal Policy Space



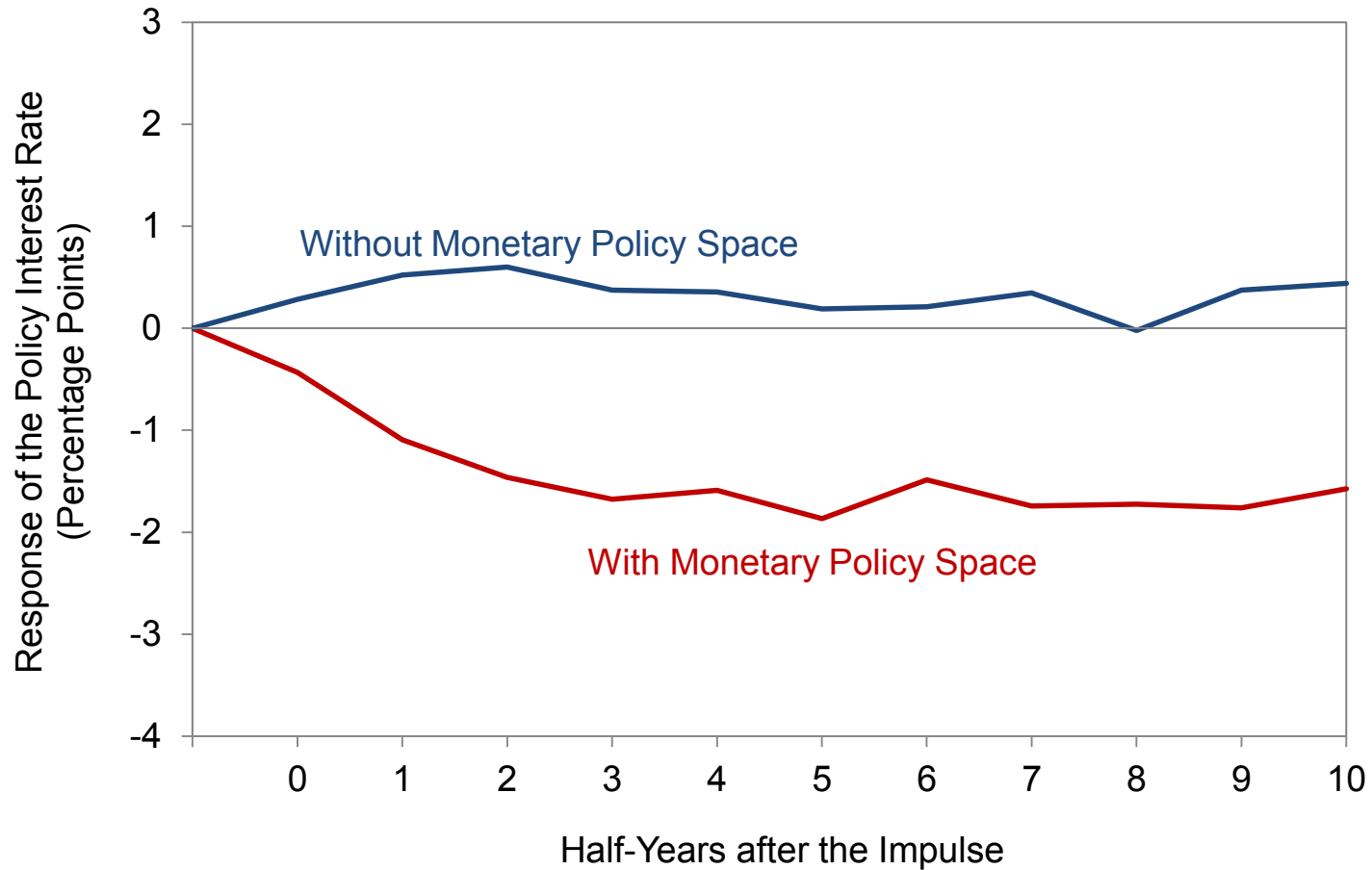
Another Forecasting Exercise

- Compare the forecast errors from a simple forecast based primarily on lagged output and one that includes the interaction effects with both types of policy space.
- The variance of the forecast errors across the 19 episodes of high distress is roughly **30% smaller** when the two interaction effects are included.

IV. MECHANISMS BY WHICH MACROPOLICY SPACE MATTERS

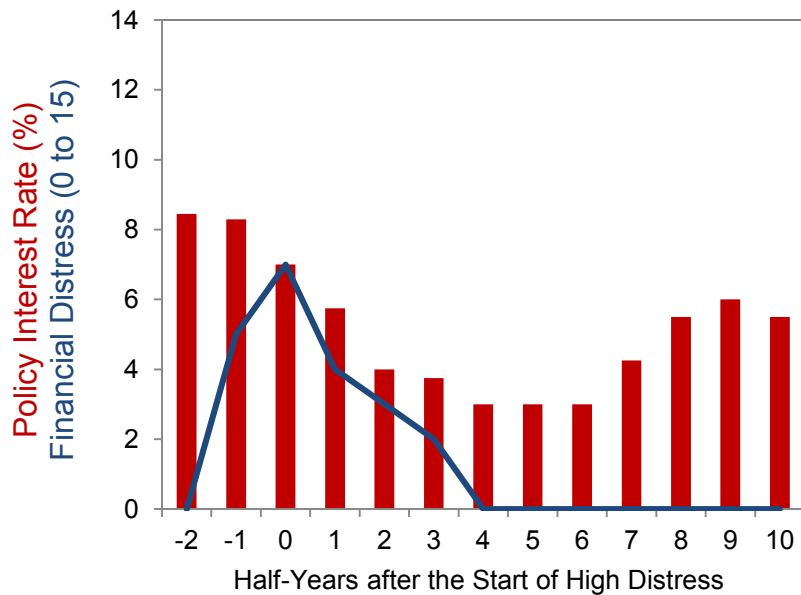
Behavior of the Policy Interest Rate after a Financial Crisis

With and Without Monetary Policy Space

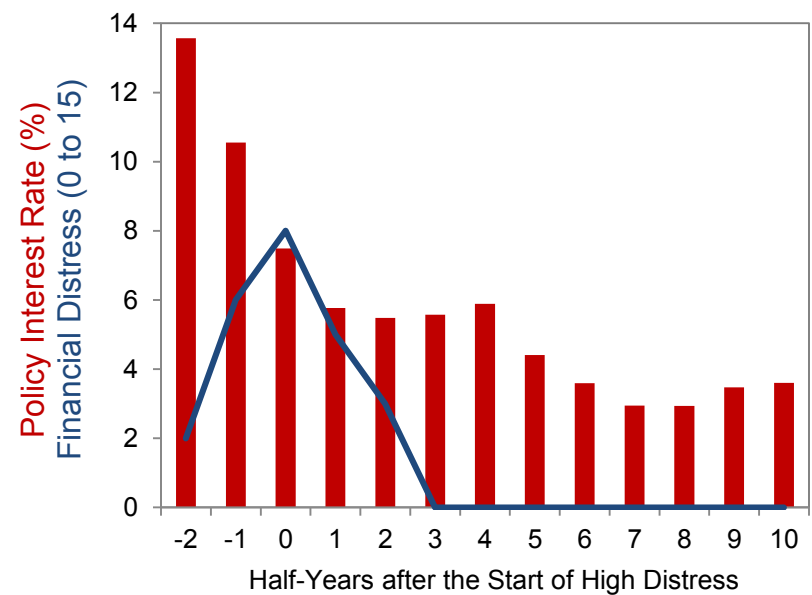


Behavior of the Policy Interest Rate in Key Episodes When There *Was* Monetary Policy Space

United States, 1990:2



Finland, 1993:1

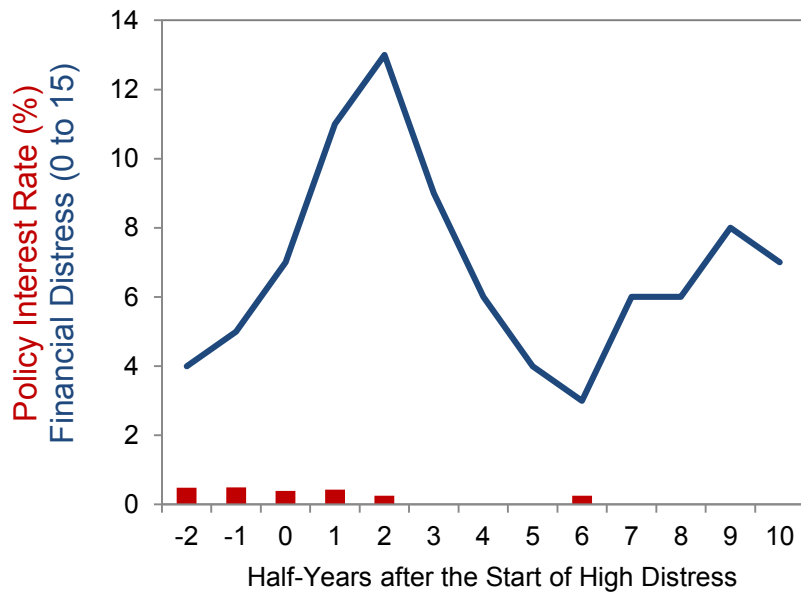


Red: Policy Interest Rate

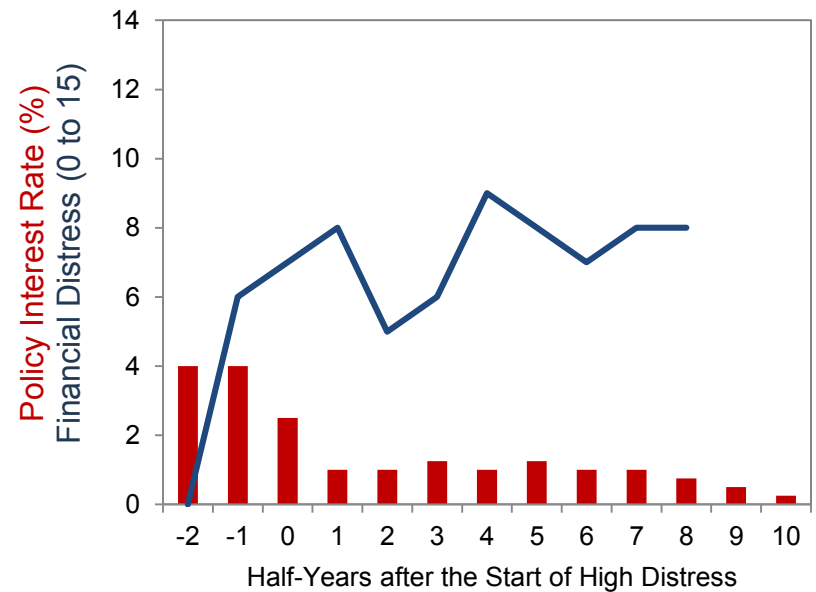
Blue: Measure of Financial Distress

Behavior of the Policy Interest Rate in Key Episodes When There *Was Not* Monetary Policy Space

Japan, 1997:2



Portugal, 2008:2

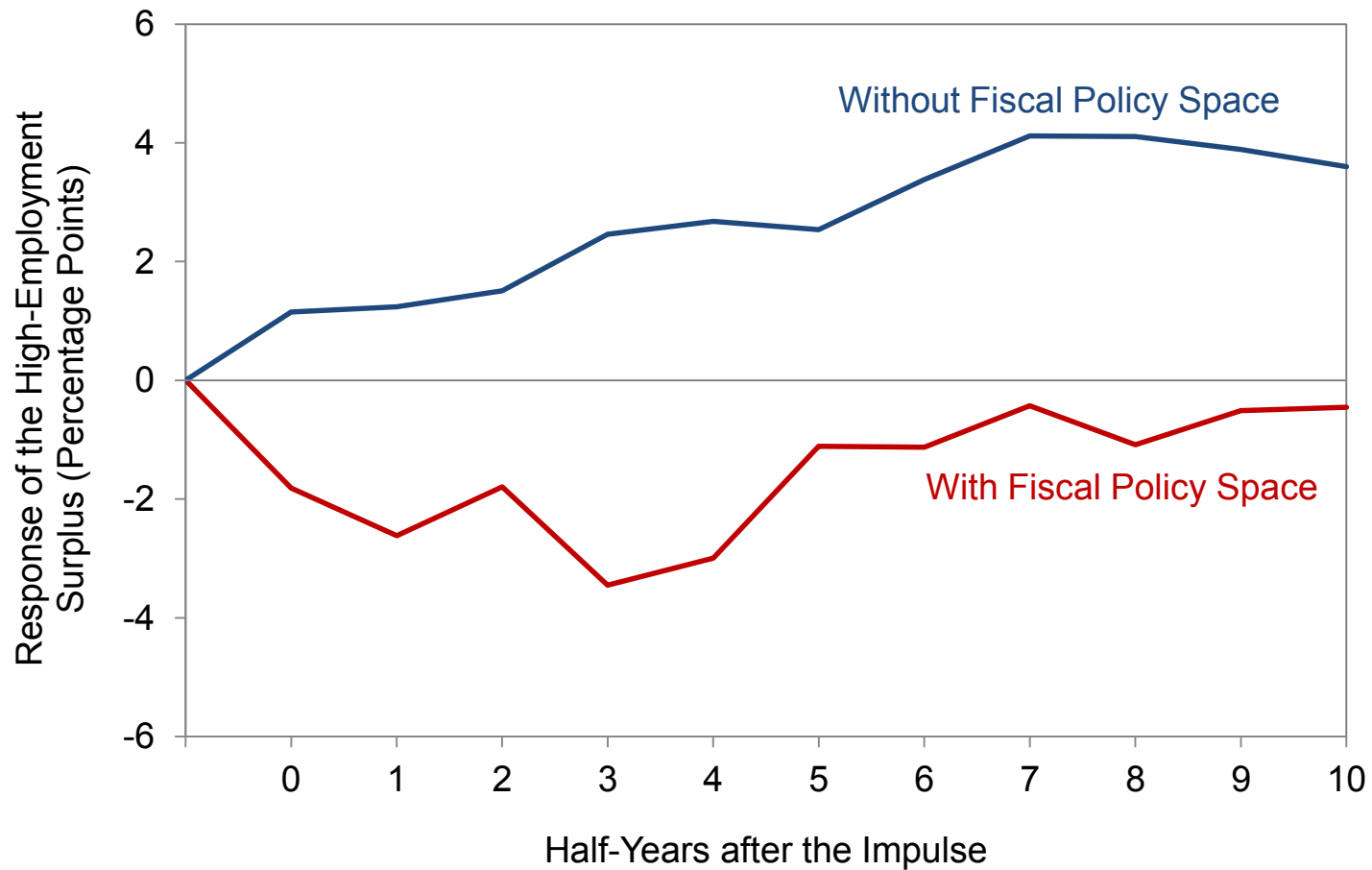


Red: Policy Interest Rate

Blue: Measure of Financial Distress

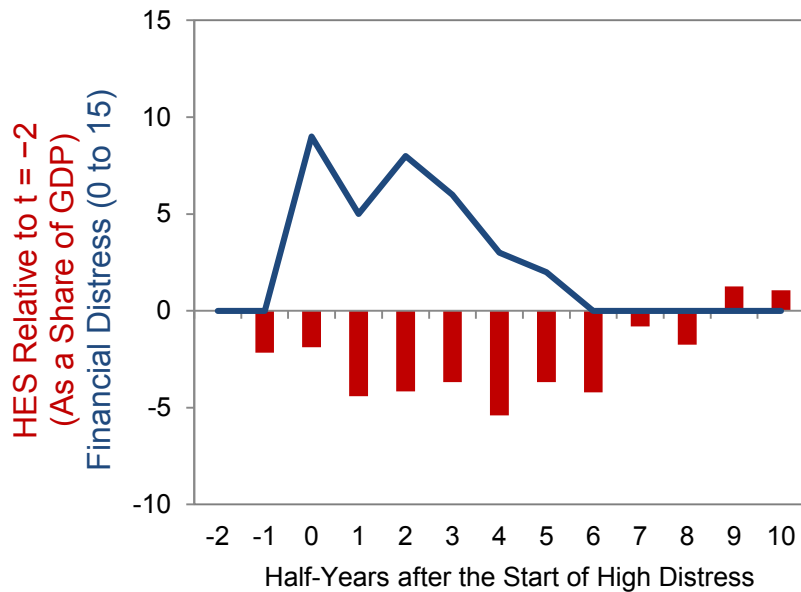
Behavior of the High-Employment Surplus after a Financial Crisis

With and Without Fiscal Policy Space

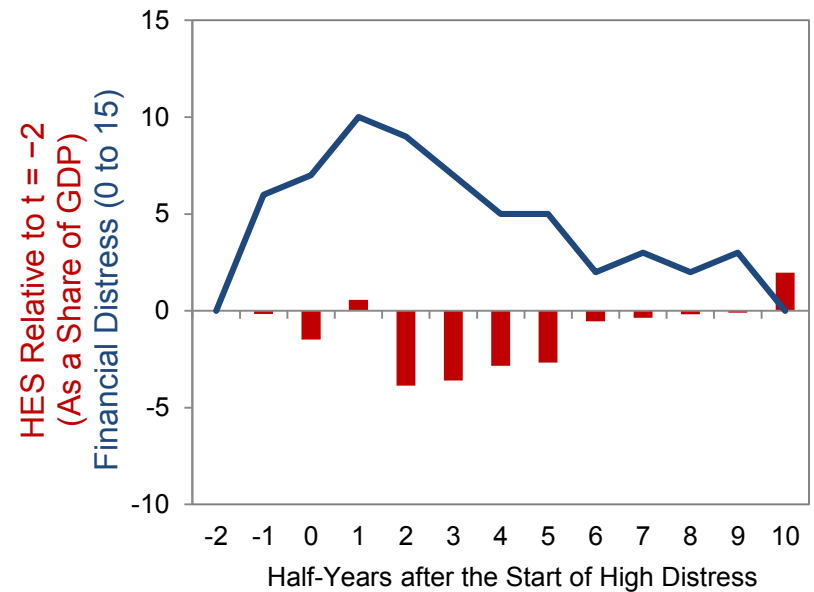


Behavior of the High-Employment Surplus in Key Episodes When There Was Fiscal Policy Space

Norway, 1991:2



United Kingdom, 2008:1

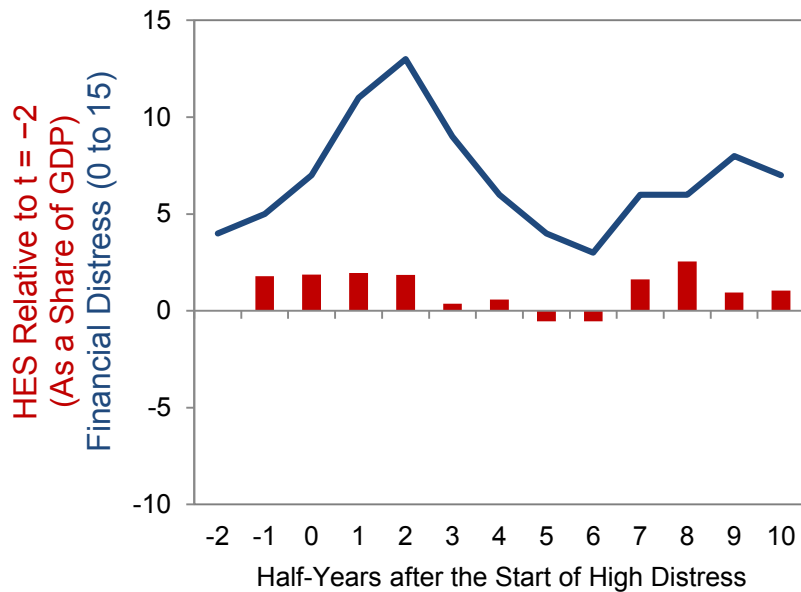


Red: High-Employment Surplus

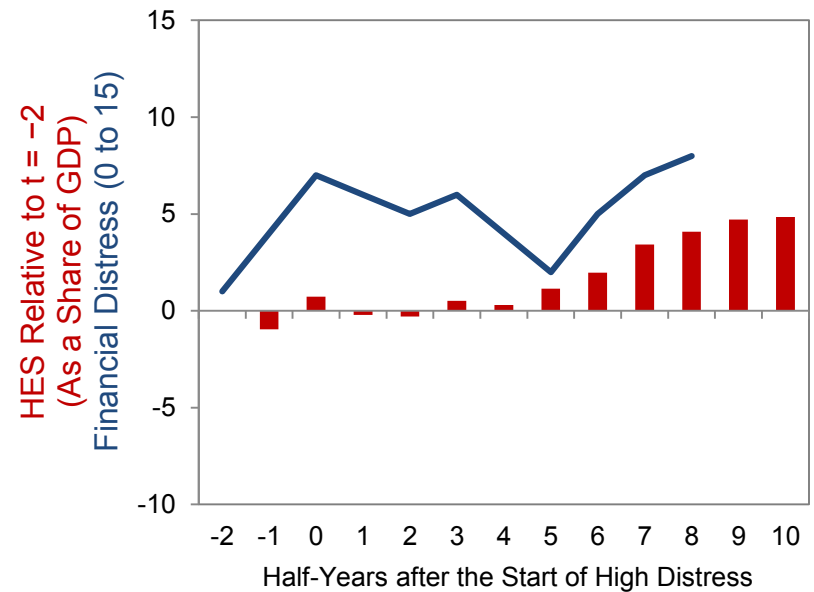
Blue: Measure of Financial Distress

Behavior of the High-Employment Surplus in Key Episodes When There *Was Not* Fiscal Policy Space

Japan, 1997:2



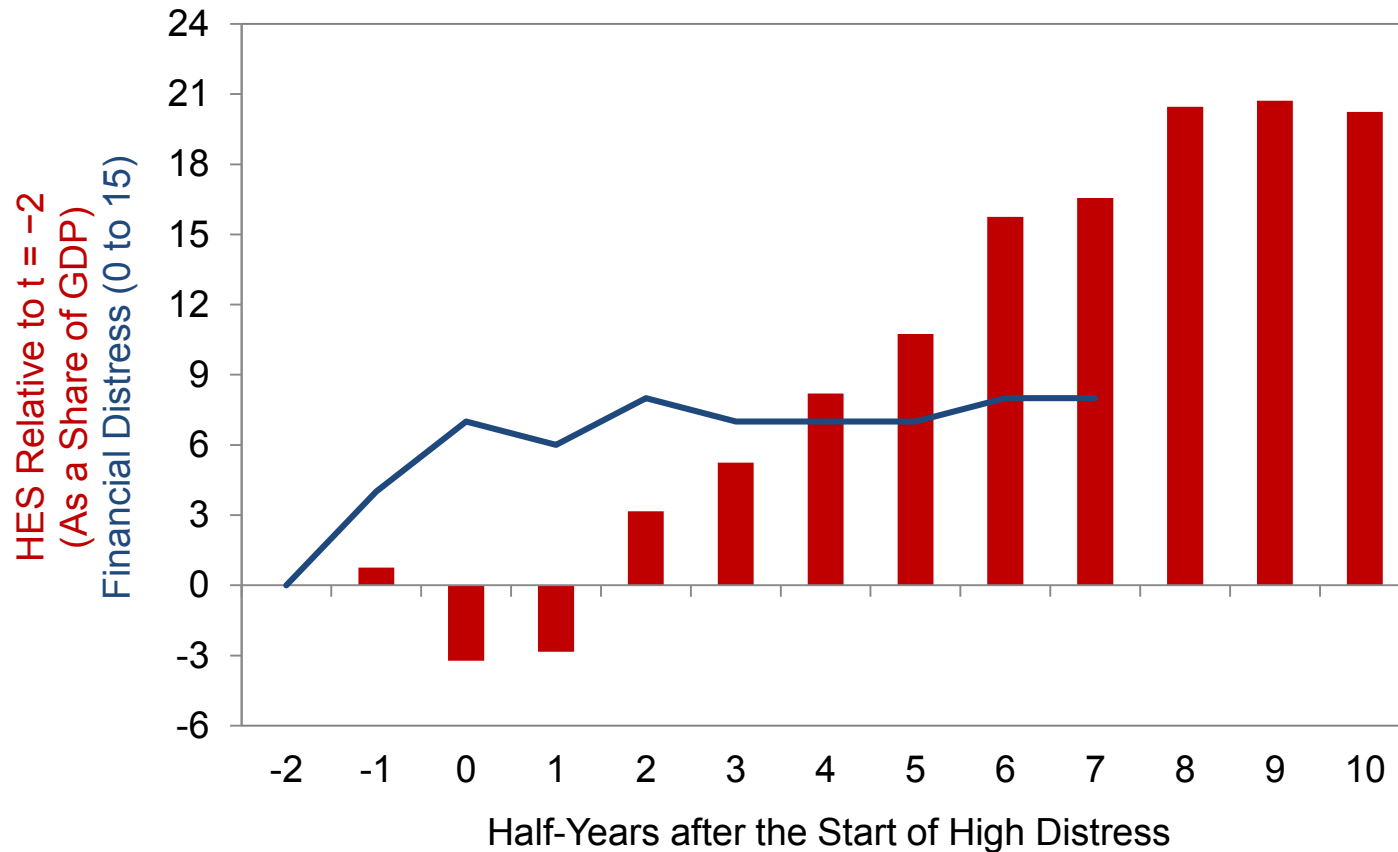
Italy, 2008:2



Red: High-Employment Surplus

Blue: Measure of Financial Distress

Behavior of High-Employment Surplus in Greece (2009:1) When There Was Not Fiscal Policy Space

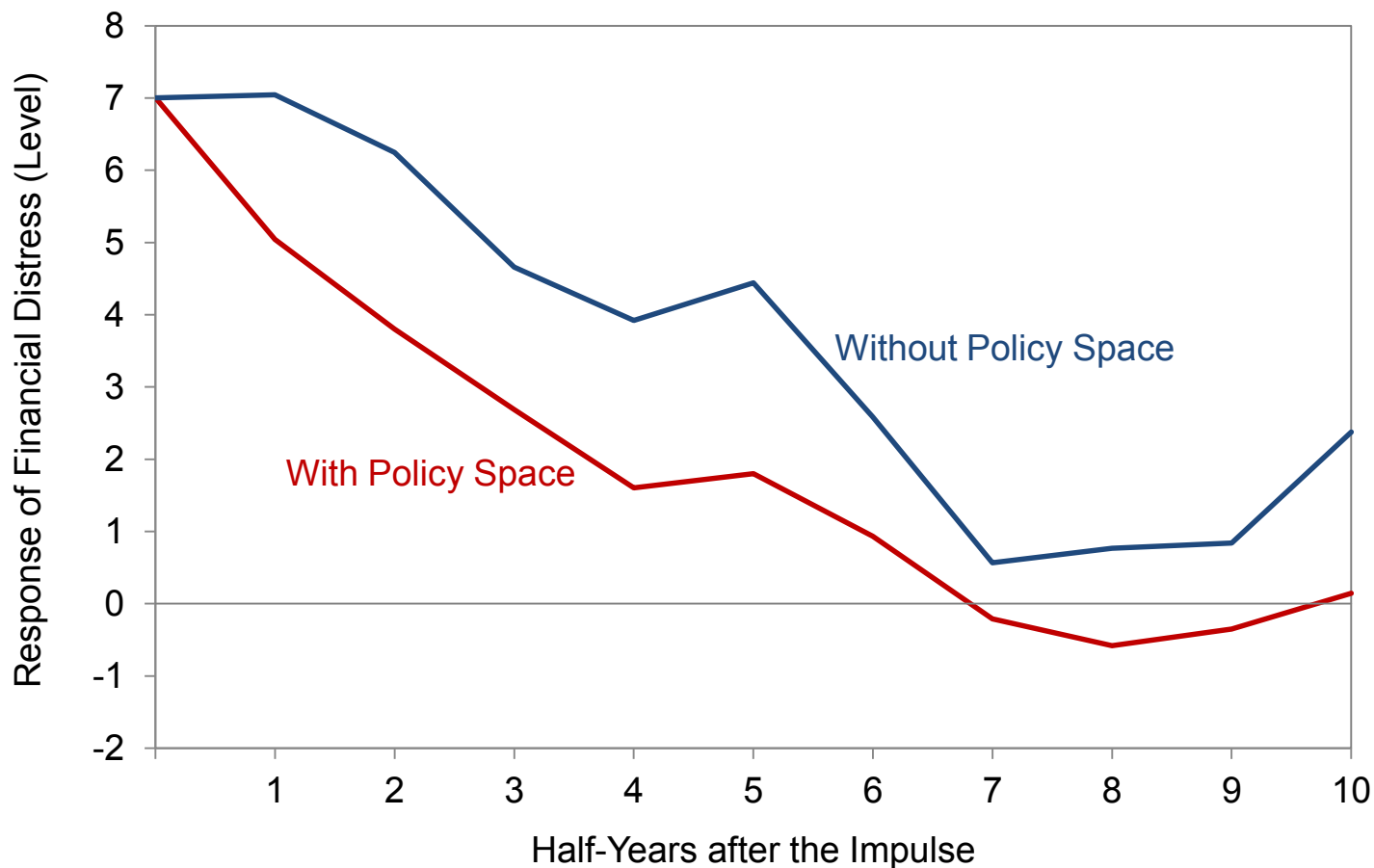


Red: High-Employment Surplus

Blue: Measure of Financial Distress

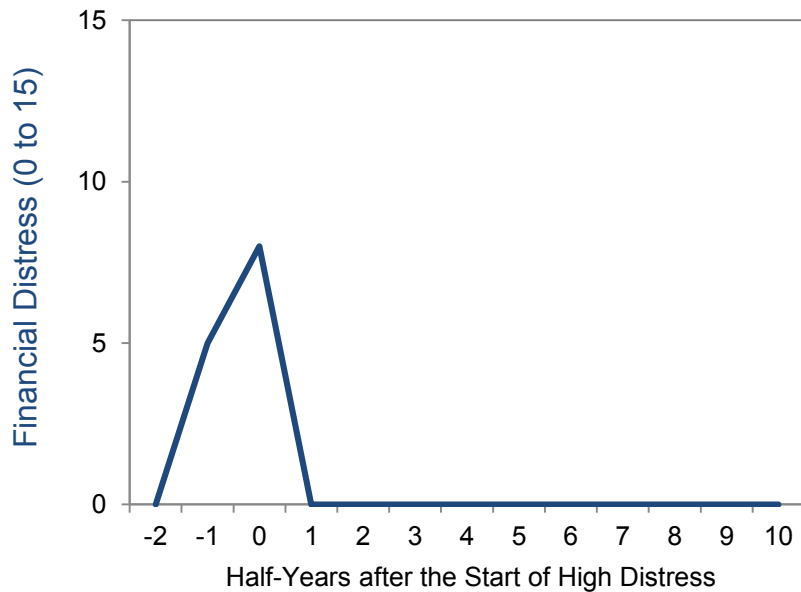
Behavior of Financial Distress after a Financial Crisis

With *Both* Monetary and Fiscal Policy Space
and Without *Either* Monetary or Fiscal Policy Space

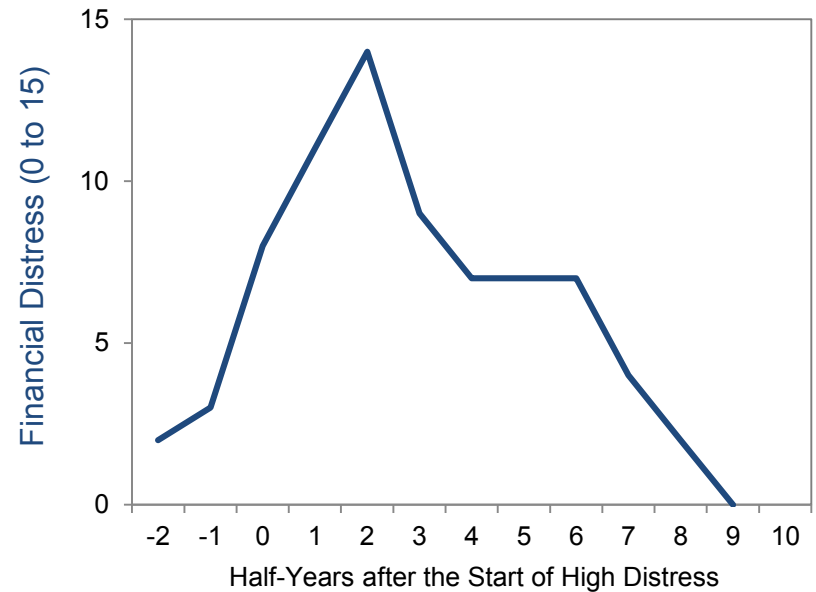


Behavior of Financial Distress in Key Episodes When There *Was* Policy Space

Sweden, 1993:1

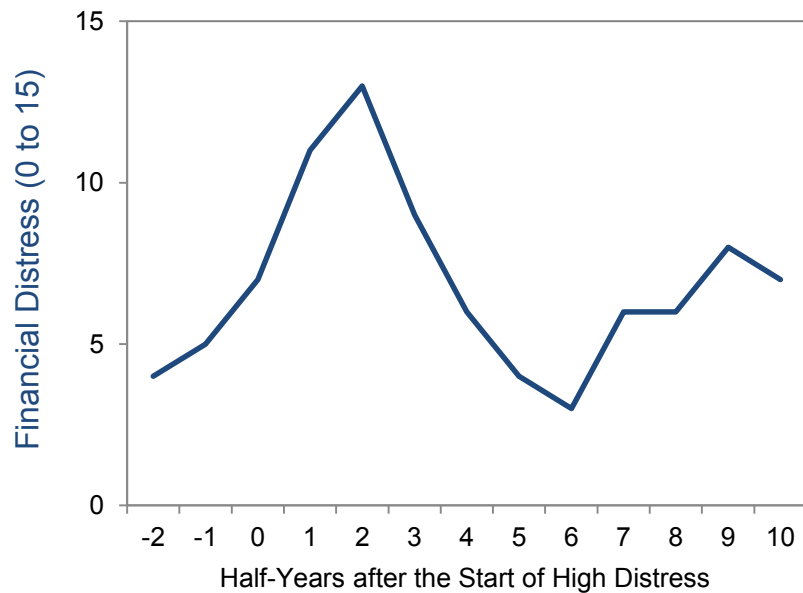


Iceland, 2008:1

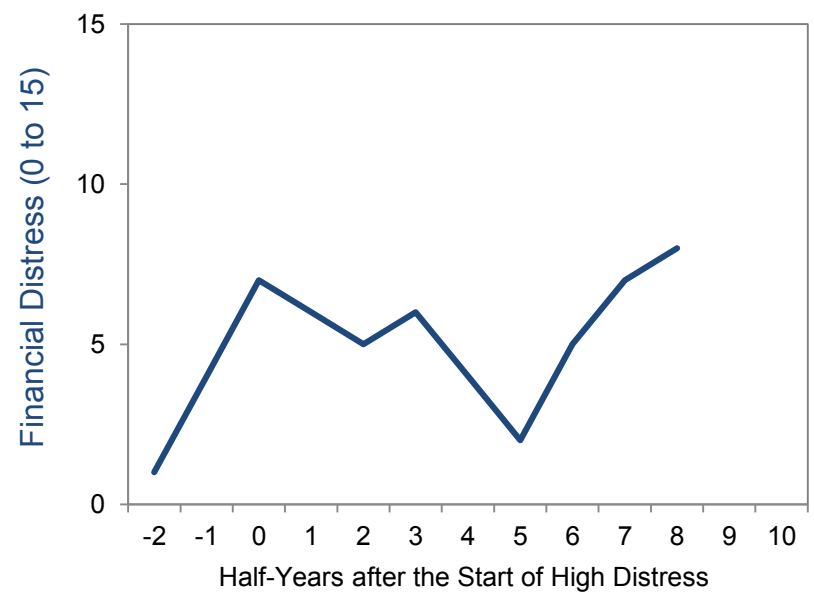


Behavior of the Financial Distress in Key Episodes When There *Was Not* Policy Space

Japan, 1997:2



Italy, 2008:2



V. CONCLUSION

The November 2009 Employment Report



Implications for Policy

- Fiscal policy: An argument for responsible for policy in normal times.
- Monetary policy: An argument for higher inflation in normal times.
- Need to actually use policy when a crisis hits.



New Measure of Financial Distress

- Careful definition of financial distress.
- We use a single real-time narrative source: the *OECD Economic Outlook*.
- We scale financial distress from 0 to 15 for 24 OECD countries in each half-year between 1967 and 2012.

Approach Used to Estimate the Average Aftermath of Financial Distress

- We have data on real GDP and financial distress for 24 countries for 1980 – present.
- Regress GDP at various half-years after time t on financial distress at t .
- The sequence of coefficients on distress for the various horizons provides an estimate of the impulse response function.
- We consider an impulse of 7.

Approach Used to Estimate the Variation in the Aftermaths of Crises

- Construct a forecast based just on how GDP typically responds to lagged GDP.
- Focus on 19 episodes when a country in our sample has distress of at least a 7.
- Use actual GDP up through a year before distress reached 7.

Approach Used to Estimate the Contribution of Policy Space

- As before, regress GDP at various half-years after time t on financial distress at t .
- Include an interaction term between financial distress and prior policy space.
- A positive coefficient on the interaction term means that output declines less following a crisis if there is policy space.

Including Interactions between Distress and Both Monetary and Fiscal Policy Space

- With the baseline measures, fiscal space appears to be more important.
- The coefficient on fiscal space interaction is consistently positive and highly significant; that on the monetary space interaction is consistently positive, but only sometimes significant.

Possible Mechanisms

- Countries with more policy space use policy more in response to financial distress.
- Financial distress is less persistent in countries with policy space.

Approach Used to Estimate the Effect of Policy Space on the Policy Response

- Regress a measure of policy at various half-years after time t on financial distress at t .
- Include an interaction term between financial distress and prior policy space.
- For monetary policy, use the change in the policy interest rate.
- For fiscal policy, use a proxy for the change in the high-employment surplus.

Approach Used to Estimate the Effect of Policy Space on the Persistence of Financial Distress

- Regress financial distress at various half-years after time t on distress at t .
- Include an interaction term between financial distress and prior policy space.

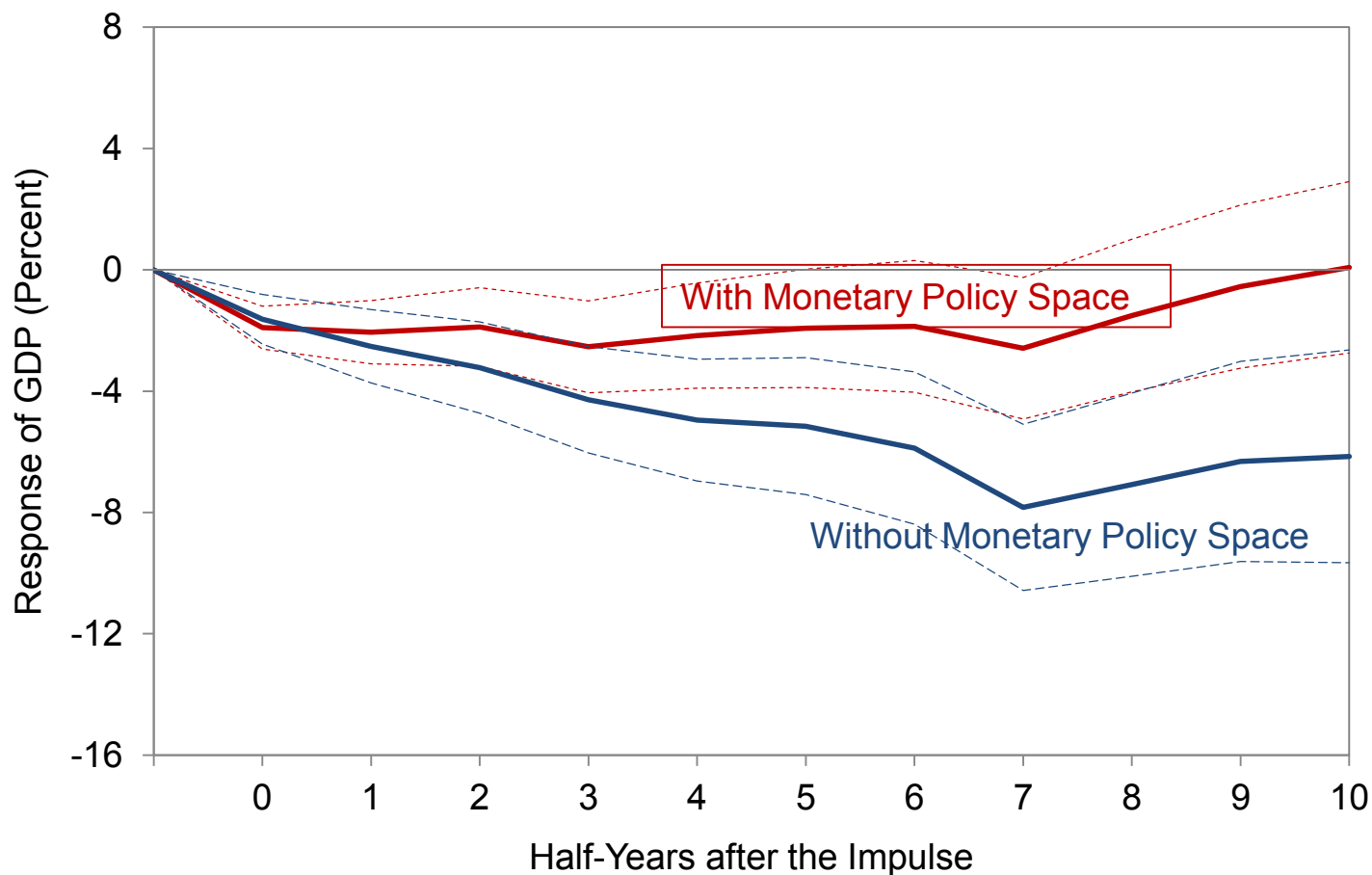
Message

- Macroeconomic policy space appears to have a very large impact on the aftermath of financial crises.
- Countries with monetary and fiscal policy space respond much more aggressively to crises, see their financial distress resolve more quickly, and suffer much less severe aftermaths.

Behavior of Real GDP after a Financial Crisis

With and Without Monetary Policy Space

(Using Dummy Accounting for the Euro Area)



Results using the Variant that Accounts for the Stability and Growth Pact

- Not being subject to the SGP is good for performance following a crisis (though not significant).
- Debt ratio interaction term is still positive and highly significant.

Summary on Robustness

- In some specifications (for example, using some alternative measures of monetary policy space) and samples (for example, excluding Greece), **one** of monetary or fiscal space does not have a large impact on the aftermath.
- In **all** specifications and samples that include measures of both monetary and fiscal space, the difference in outcomes between countries with both types of space and countries without either type of space is very large.

Directions for Further Research

- Alternative measures of monetary and fiscal policy space.
- Appropriate treatment of the euro area and the Stability and Growth Pact.
- Why is there a link between fiscal space and the fiscal policy response?
- Can we say more about causation?